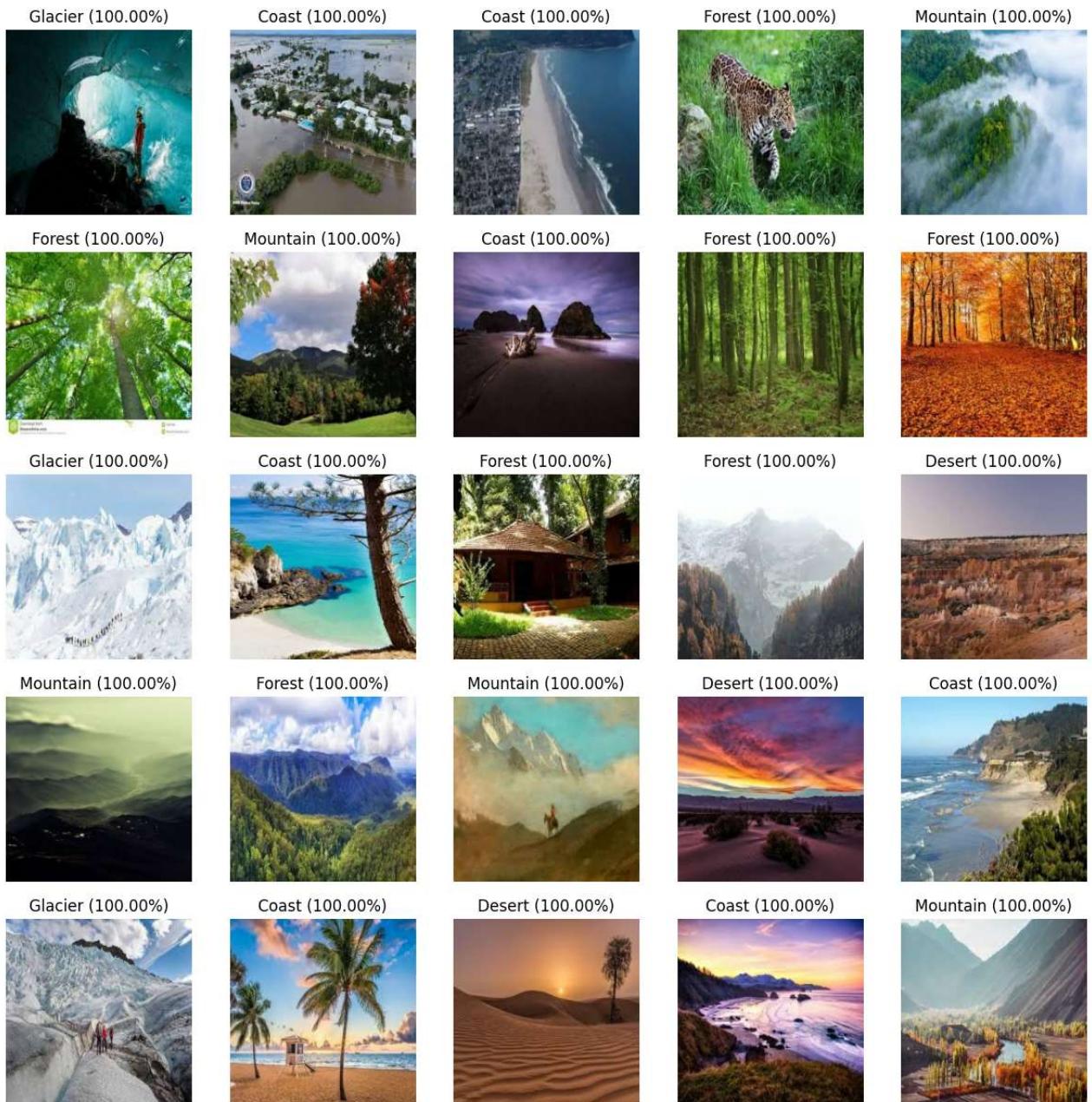


Visualize Dataset

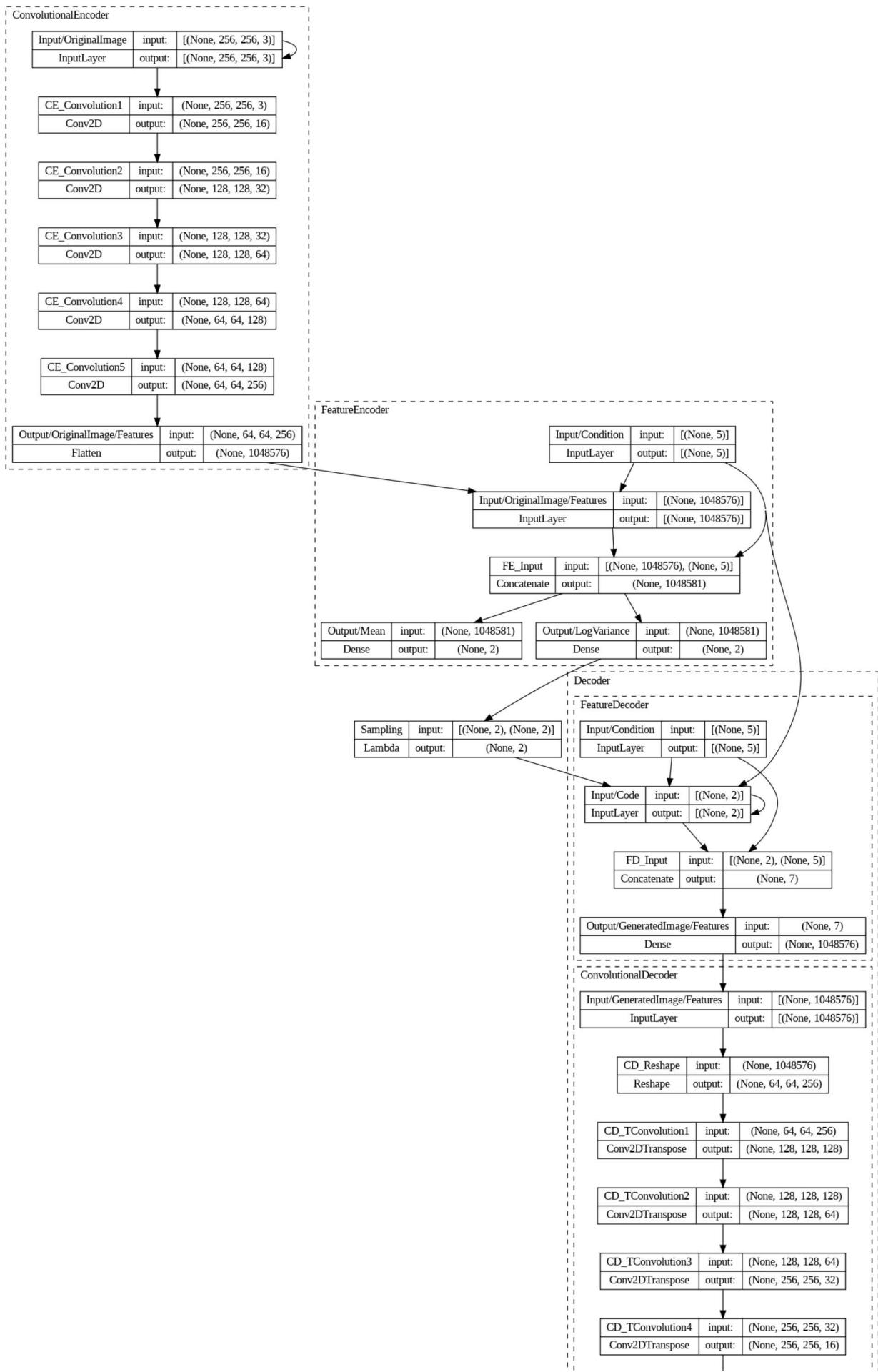


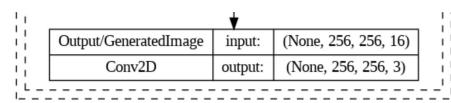
Conditional Variational AutoEncoder (CVAE)

Model: "CVAE"

Layer (type)	Output Shape	Param #	Connected to
<hr/>			
Input/OriginalImage (Input Layer)	[(None, 256, 256, 3)]	0	[]
ConvolutionalEncoder (Sequential)	(None, 1048576)	392608	['Input/OriginalImage[0][0]']
Input/Condition (InputLayer)	[(None, 5)]	0	[]
FeatureEncoder (Functional)	[(None, 2), (None, 2)]	4194328	['ConvolutionalEncoder[1][0]', 'Input/Condition[0][0]']
Sampling (Lambda)	(None, 2)	0	['FeatureEncoder[1][0]', 'FeatureEncoder[1][1]']
Decoder (Functional)	(None, 256, 256, 3)	8563123	['Sampling[0][0]', 'Input/Condition[0][0]']
<hr/>			
Total params: 13150059 (50.16 MB)			
Trainable params: 13150059 (50.16 MB)			
Non-trainable params: 0 (0.00 Byte)			

Out[206...]



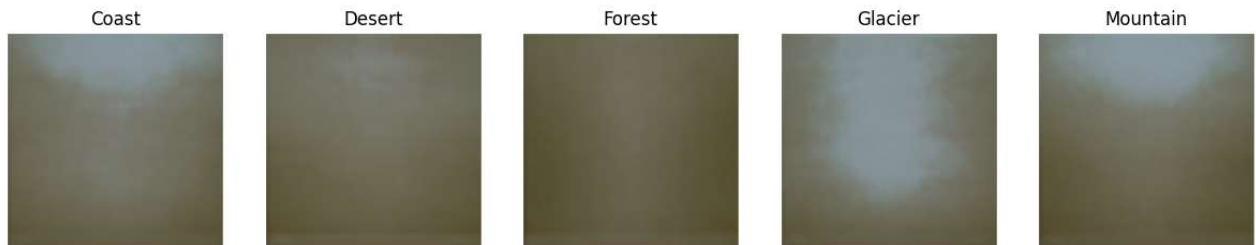


Training

Epoch 1/100
6/Unknown - 12s 281ms/step - loss: 749.9612 - reconstruction_error: 749.2440 - regularization_error: 0.
7172
WARNING:tensorflow:Callback method `on_train_batch_end` is slow compared to the batch time (batch time: 0.052
7s vs `on_train_batch_end` time: 0.1893s). Check your callbacks.
300/Unknown - 75s 215ms/step - loss: 610.5817 - reconstruction_error: 609.7162 - regularization_error: 0.
8655
[2023-12-07 10:55:06.448902]: Generating fixed images for epoch 1 ...



[2023-12-07 10:55:07.244006]: Generating random images for epoch 1 ...



```
300/300 [=====] - 92s 272ms/step - loss: 610.5817 - reconstruction_error: 609.7162 - regularization_error: 0.8655 - val_loss: 540.0325 - val_reconstruction_error: 538.6529 - val_regularization_error: 1.0461
Epoch 2/100
300/300 [=====] - ETA: 0s - loss: 517.5029 - reconstruction_error: 516.4391 - regularization_error: 1.0638
[2023-12-07 10:56:12.146719]: Generating fixed images for epoch 2 ...
```



```
[2023-12-07 10:56:12.897930]: Generating random images for epoch 2 ...
```



```
300/300 [=====] - 66s 220ms/step - loss: 517.5029 - reconstruction_error: 516.4391 - regularization_error: 1.0638 - val_loss: 515.4398 - val_reconstruction_error: 514.4291 - val_regularization_error: 1.0471
Epoch 3/100
300/300 [=====] - ETA: 0s - loss: 498.5740 - reconstruction_error: 497.5212 - regularization_error: 1.0528
[2023-12-07 10:57:21.074612]: Generating fixed images for epoch 3 ...
```



[2023-12-07 10:57:21.562624]: Generating random images for epoch 3 ...



300/300 [=====] - 68s 225ms/step - loss: 498.5740 - reconstruction_error: 497.5212 - regularization_error: 1.0528 - val_loss: 506.7193 - val_reconstruction_error: 505.5620 - val_regularization_error: 1.0251

Epoch 4/100

300/300 [=====] - ETA: 0s - loss: 494.2695 - reconstruction_error: 493.2188 - regularization_error: 1.0507

[2023-12-07 10:58:25.400394]: Generating fixed images for epoch 4 ...



[2023-12-07 10:58:25.873433]: Generating random images for epoch 4 ...



300/300 [=====] - 64s 213ms/step - loss: 494.2695 - reconstruction_error: 493.2188 - regularization_error: 1.0507 - val_loss: 503.2631 - val_reconstruction_error: 501.9507 - val_regularization_error: 1.0295

Epoch 5/100

300/300 [=====] - ETA: 0s - loss: 496.9465 - reconstruction_error: 495.8867 - regularization_error: 1.0598

[2023-12-07 10:59:23.817764]: Generating fixed images for epoch 5 ...



[2023-12-07 10:59:24.909211]: Generating random images for epoch 5 ...



300/300 [=====] - 60s 198ms/step - loss: 496.9465 - reconstruction_error: 495.8867 - regularization_error: 1.0598 - val_loss: 500.5351 - val_reconstruction_error: 499.4360 - val_regularization_error: 1.0547

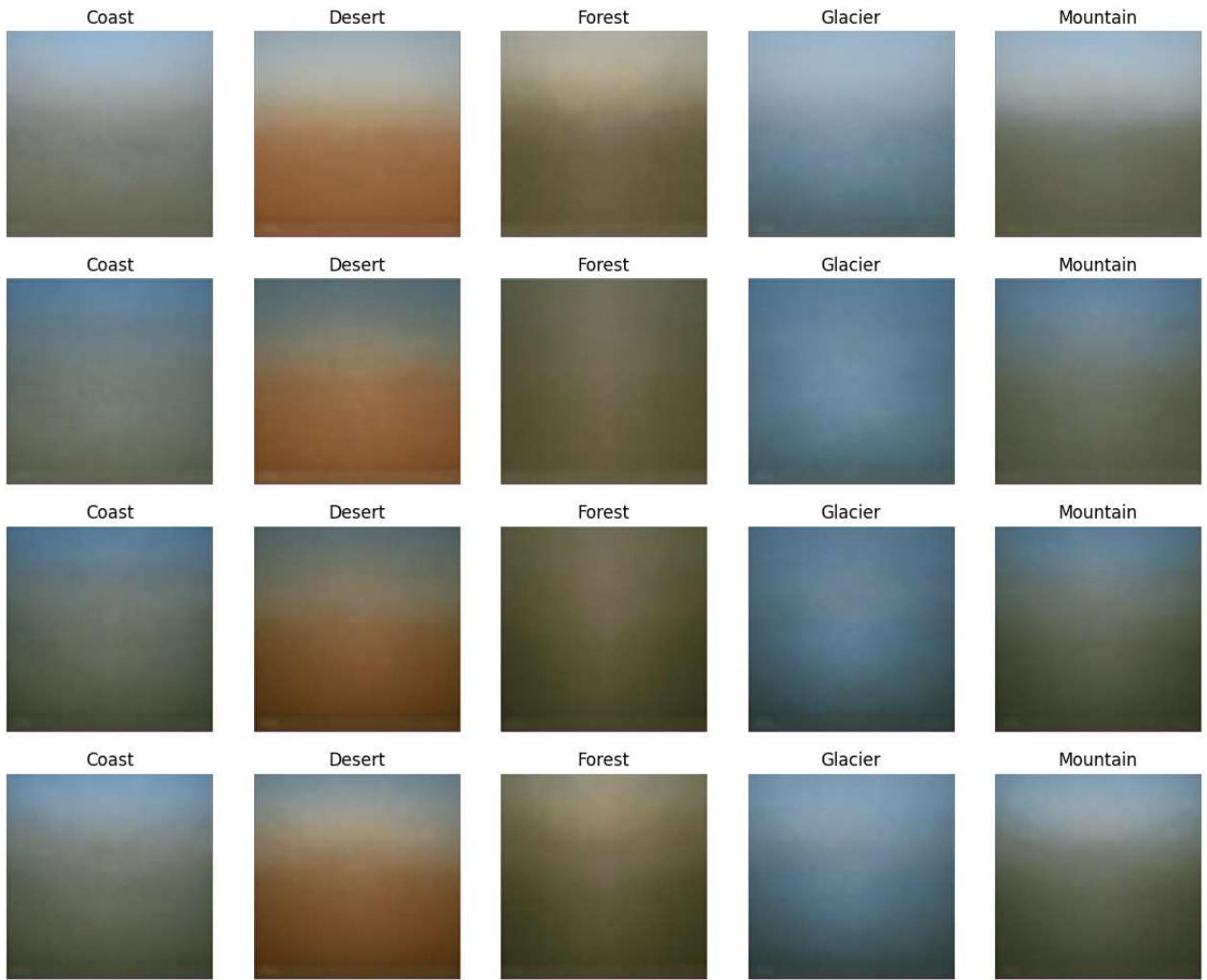
Epoch 6/100

300/300 [=====] - ETA: 0s - loss: 494.0486 - reconstruction_error: 492.9949 - regularization_error: 1.0534

[2023-12-07 11:00:29.177612]: Generating fixed images for epoch 6 ...



[2023-12-07 11:00:29.614804]: Generating random images for epoch 6 ...



300/300 [=====] - 64s 214ms/step - loss: 494.0486 - reconstruction_error: 492.9949 - regularization_error: 1.0534 - val_loss: 505.9640 - val_reconstruction_error: 504.8811 - val_regularization_error: 1.0554

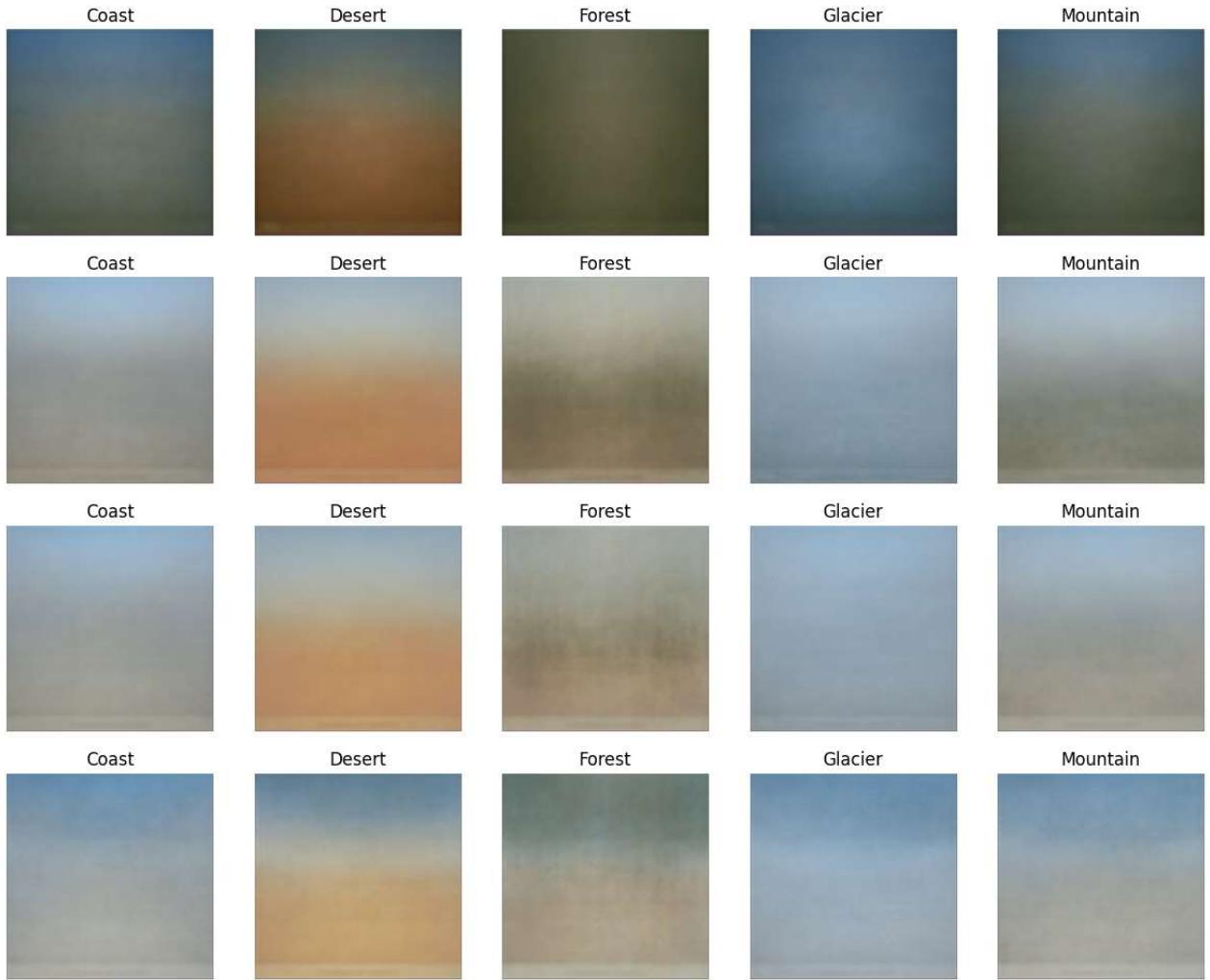
Epoch 7/100

300/300 [=====] - ETA: 0s - loss: 492.8802 - reconstruction_error: 491.8258 - regularization_error: 1.0545

[2023-12-07 11:01:31.311365]: Generating fixed images for epoch 7 ...



[2023-12-07 11:01:31.743921]: Generating random images for epoch 7 ...



300/300 [=====] - 62s 205ms/step - loss: 492.8802 - reconstruction_error: 491.8258 - regularization_error: 1.0545 - val_loss: 499.6840 - val_reconstruction_error: 498.6536 - val_regularization_error: 1.0689

Epoch 8/100

300/300 [=====] - ETA: 0s - loss: 491.8841 - reconstruction_error: 490.8236 - regularization_error: 1.0605

[2023-12-07 11:02:31.011242]: Generating fixed images for epoch 8 ...



[2023-12-07 11:02:32.012223]: Generating random images for epoch 8 ...



300/300 [=====] - 60s 200ms/step - loss: 491.8841 - reconstruction_error: 490.8236 - regularization_error: 1.0605 - val_loss: 502.1079 - val_reconstruction_error: 500.9289 - val_regularization_error: 1.0768

Epoch 9/100

300/300 [=====] - ETA: 0s - loss: 491.3878 - reconstruction_error: 490.3242 - regularization_error: 1.0635

[2023-12-07 11:03:37.775850]: Generating fixed images for epoch 9 ...



[2023-12-07 11:03:38.217852]: Generating random images for epoch 9 ...



300/300 [=====] - 66s 220ms/step - loss: 491.3878 - reconstruction_error: 490.3242 - regularization_error: 1.0635 - val_loss: 500.6348 - val_reconstruction_error: 499.1863 - val_regularization_error: 1.0731

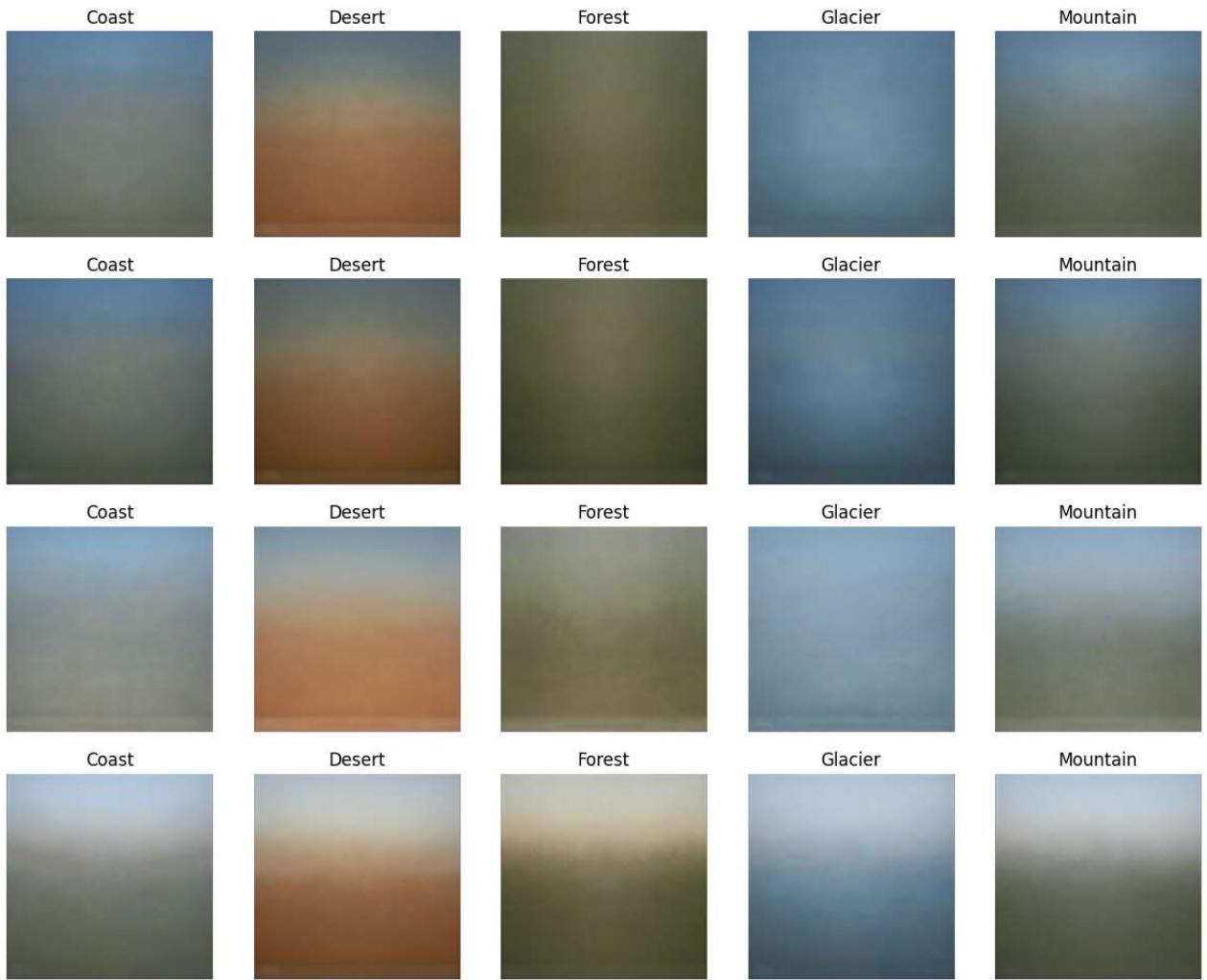
Epoch 10/100

300/300 [=====] - ETA: 0s - loss: 492.7071 - reconstruction_error: 491.6386 - regularization_error: 1.0685

[2023-12-07 11:04:38.472672]: Generating fixed images for epoch 10 ...



[2023-12-07 11:04:39.223371]: Generating random images for epoch 10 ...



300/300 [=====] - 62s 206ms/step - loss: 492.7071 - reconstruction_error: 491.6386 - regularization_error: 1.0685 - val_loss: 502.9857 - val_reconstruction_error: 501.6275 - val_regularization_error: 1.0653

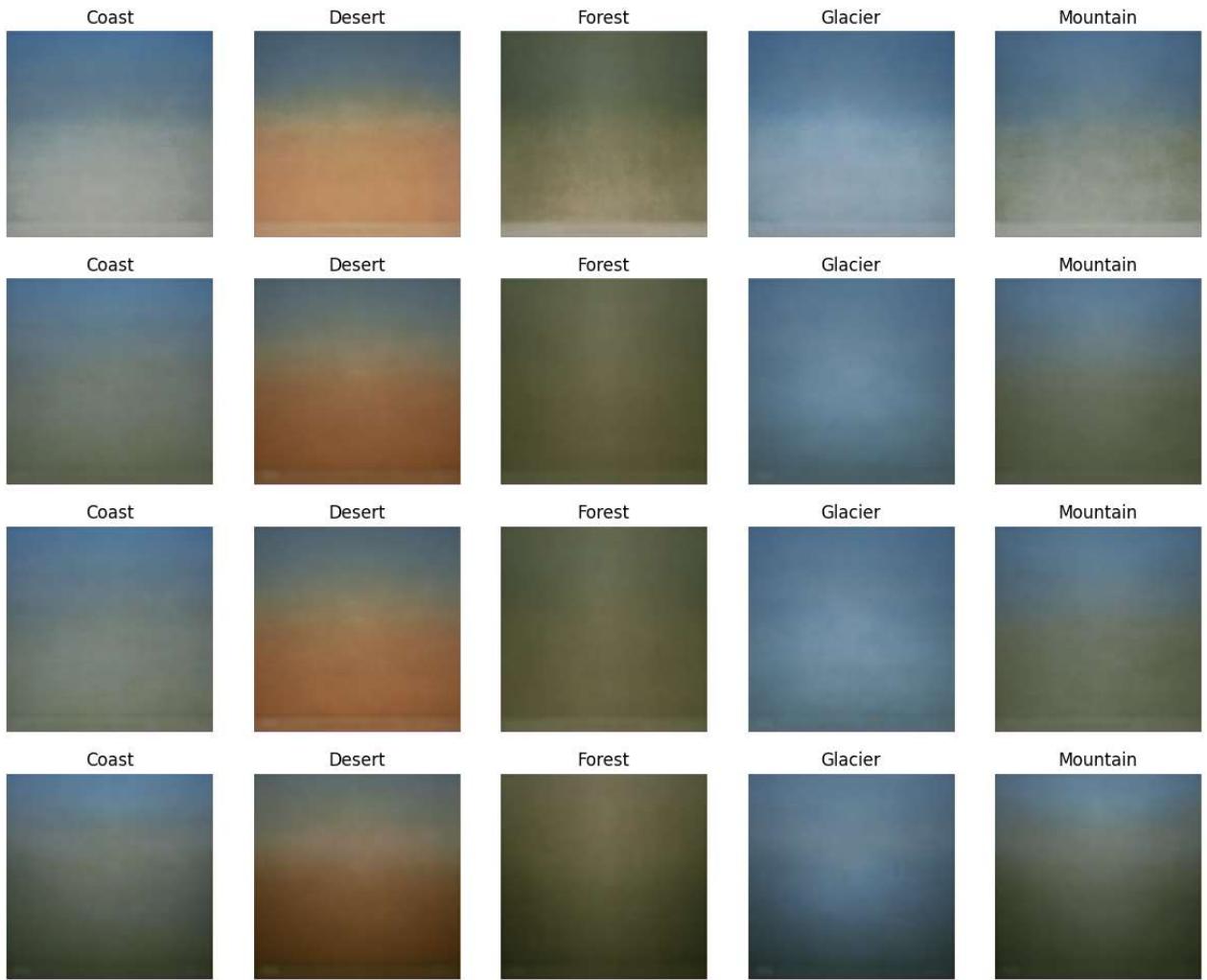
Epoch 11/100

300/300 [=====] - ETA: 0s - loss: 491.9245 - reconstruction_error: 490.8606 - regularization_error: 1.0639

[2023-12-07 11:05:42.240516]: Generating fixed images for epoch 11 ...



[2023-12-07 11:05:42.703147]: Generating random images for epoch 11 ...



300/300 [=====] - 62s 206ms/step - loss: 491.9245 - reconstruction_error: 490.8606 - regularization_error: 1.0639 - val_loss: 500.0290 - val_reconstruction_error: 498.5689 - val_regularization_error: 1.0660

Epoch 12/100

300/300 [=====] - ETA: 0s - loss: 489.8432 - reconstruction_error: 488.7798 - regularization_error: 1.0636

[2023-12-07 11:06:45.151171]: Generating fixed images for epoch 12 ...



[2023-12-07 11:06:46.010640]: Generating random images for epoch 12 ...



300/300 [=====] - 64s 212ms/step - loss: 489.8432 - reconstruction_error: 488.7798 - regularization_error: 1.0636 - val_loss: 498.7154 - val_reconstruction_error: 497.4151 - val_regularization_error: 1.0557

Epoch 13/100

300/300 [=====] - ETA: 0s - loss: 489.5418 - reconstruction_error: 488.4803 - regularization_error: 1.0618

[2023-12-07 11:07:49.966548]: Generating fixed images for epoch 13 ...



[2023-12-07 11:07:50.947707]: Generating random images for epoch 13 ...



300/300 [=====] - 65s 214ms/step - loss: 489.5418 - reconstruction_error: 488.4803 - regularization_error: 1.0618 - val_loss: 502.0835 - val_reconstruction_error: 500.8230 - val_regularization_error: 1.0769

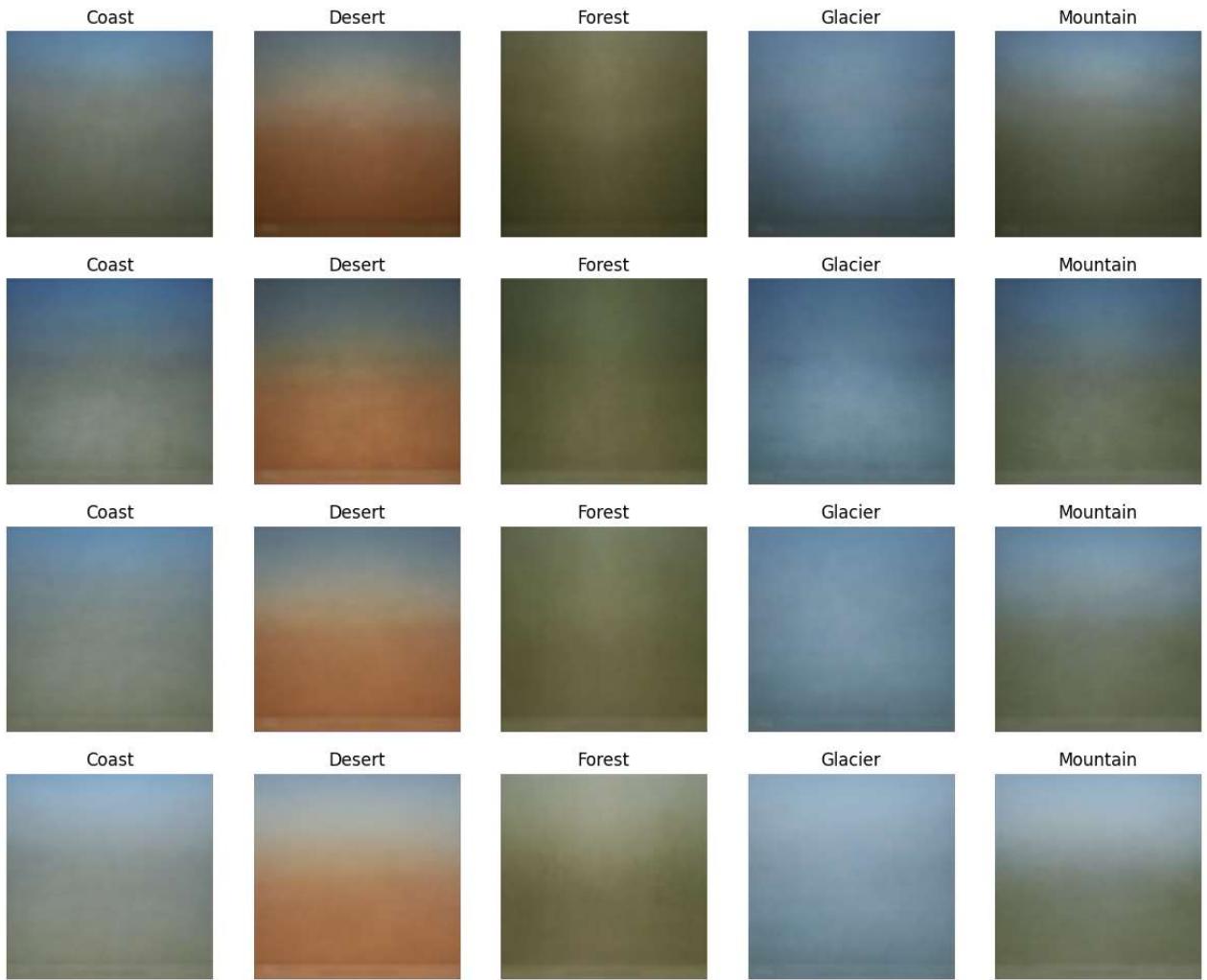
Epoch 14/100

300/300 [=====] - ETA: 0s - loss: 489.2212 - reconstruction_error: 488.1554 - regularization_error: 1.0658

[2023-12-07 11:09:11.852639]: Generating fixed images for epoch 14 ...



[2023-12-07 11:09:12.637463]: Generating random images for epoch 14 ...



300/300 [=====] - 65s 215ms/step - loss: 489.2212 - reconstruction_error: 488.1554 - regularization_error: 1.0658 - val_loss: 500.5281 - val_reconstruction_error: 499.3489 - val_regularization_error: 1.0736

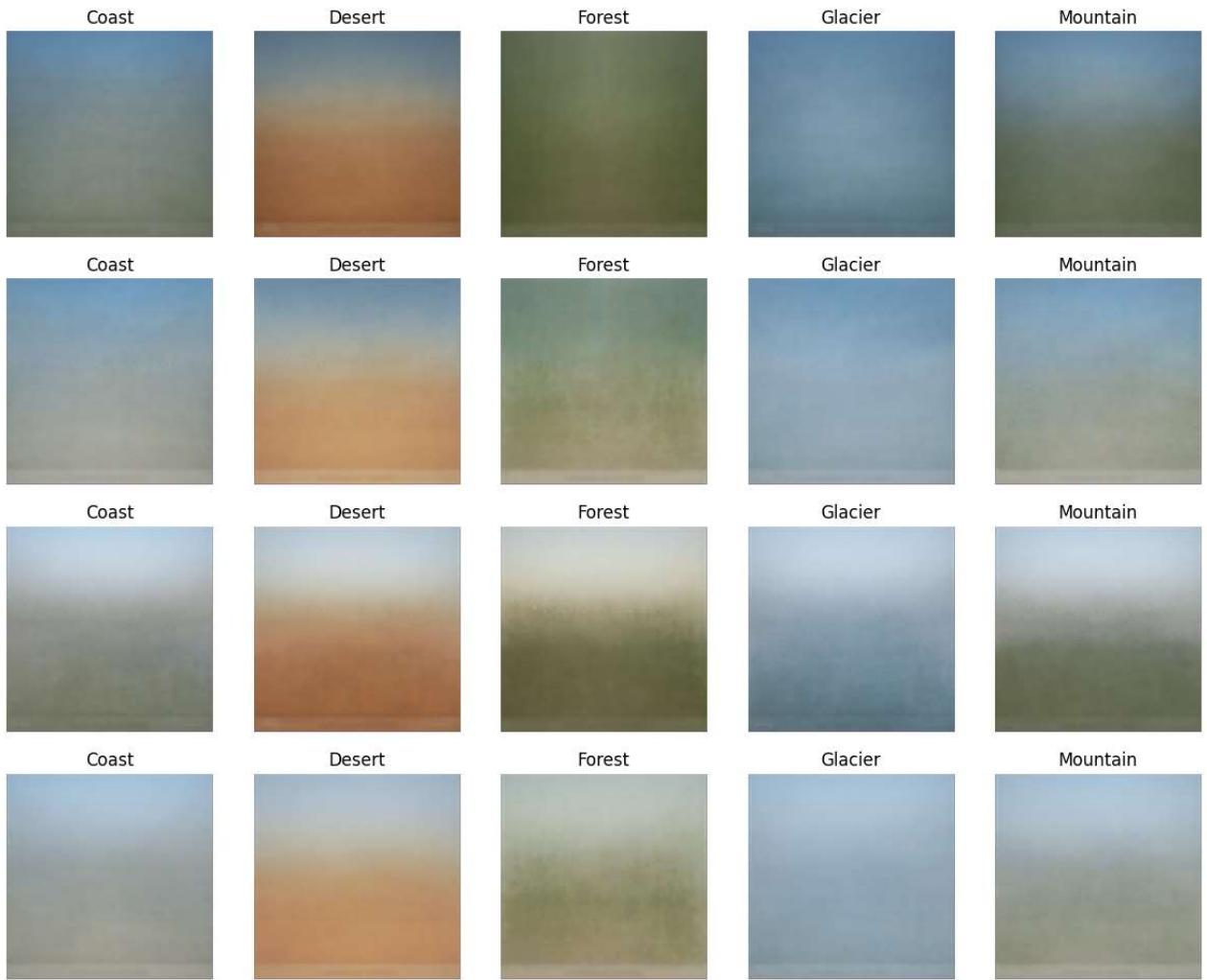
Epoch 15/100

300/300 [=====] - ETA: 0s - loss: 488.7268 - reconstruction_error: 487.6571 - regularization_error: 1.0697

[2023-12-07 11:10:31.210178]: Generating fixed images for epoch 15 ...



[2023-12-07 11:10:31.922166]: Generating random images for epoch 15 ...



300/300 [=====] - 62s 205ms/step - loss: 488.7268 - reconstruction_error: 487.6571 - regularization_error: 1.0697 - val_loss: 498.2053 - val_reconstruction_error: 497.2347 - val_regularization_error: 1.0650

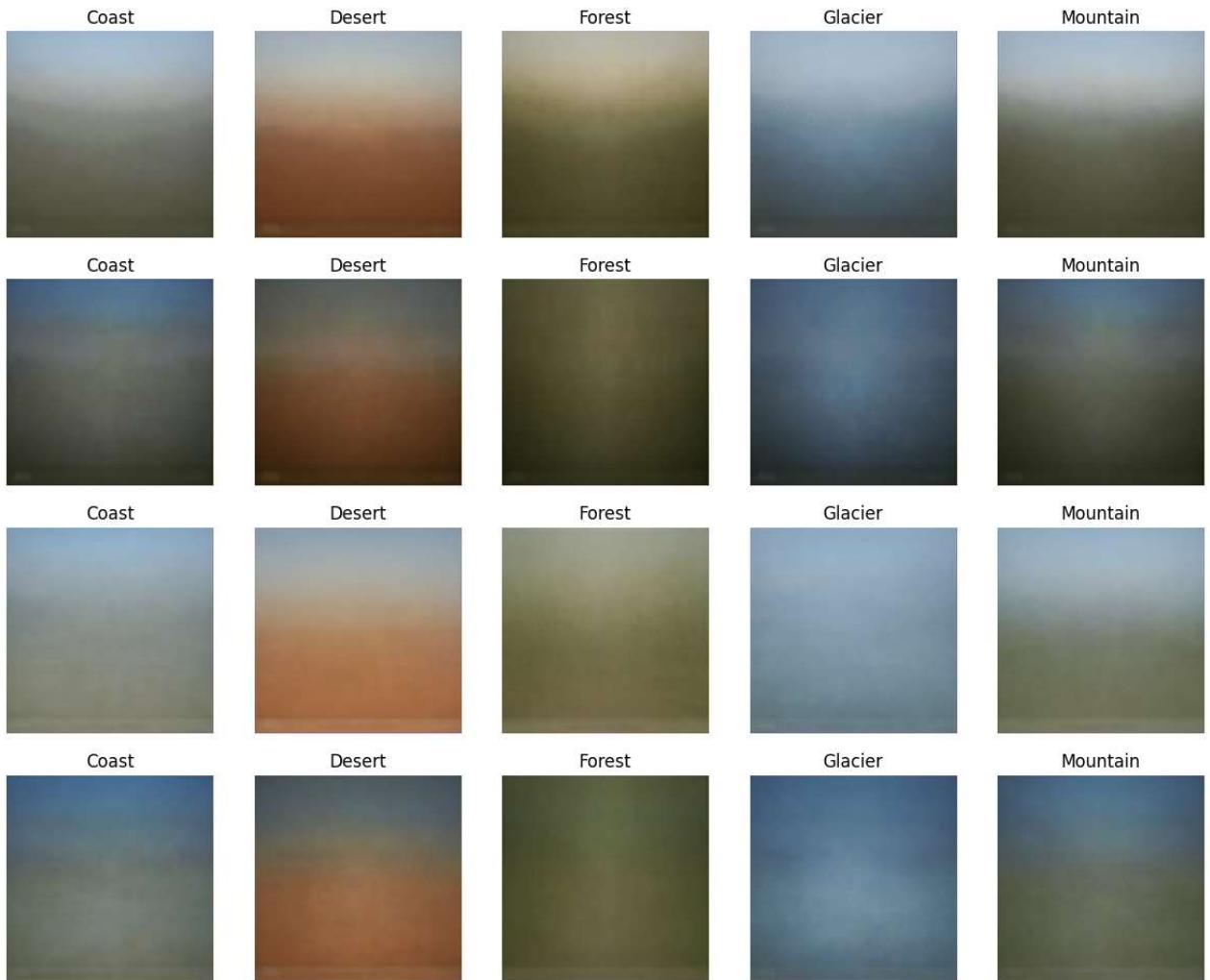
Epoch 16/100

300/300 [=====] - ETA: 0s - loss: 488.0305 - reconstruction_error: 486.9628 - regularization_error: 1.0678

[2023-12-07 11:11:34.535162]: Generating fixed images for epoch 16 ...



[2023-12-07 11:11:34.952811]: Generating random images for epoch 16 ...



300/300 [=====] - 62s 207ms/step - loss: 488.0305 - reconstruction_error: 486.9628 - regularization_error: 1.0678 - val_loss: 495.1659 - val_reconstruction_error: 493.9265 - val_regularization_error: 1.0726

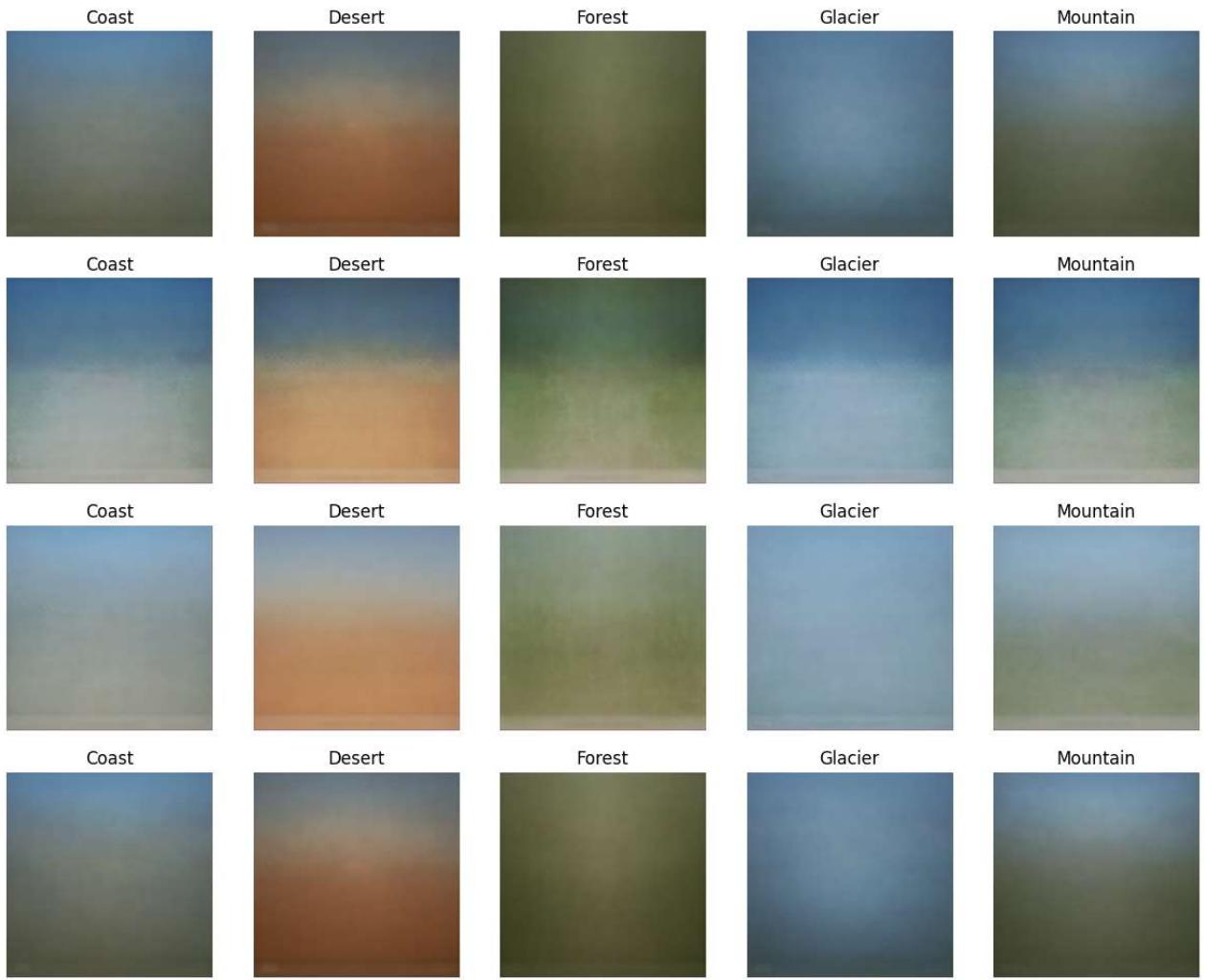
Epoch 17/100

300/300 [=====] - ETA: 0s - loss: 488.2676 - reconstruction_error: 487.1984 - regularization_error: 1.0690

[2023-12-07 11:12:37.185101]: Generating fixed images for epoch 17 ...



[2023-12-07 11:12:37.926420]: Generating random images for epoch 17 ...



300/300 [=====] - 63s 209ms/step - loss: 488.2676 - reconstruction_error: 487.1984 - regularization_error: 1.0690 - val_loss: 498.4171 - val_reconstruction_error: 497.2223 - val_regularization_error: 1.0668

Epoch 18/100

300/300 [=====] - ETA: 0s - loss: 488.1392 - reconstruction_error: 487.0739 - regularization_error: 1.0656

[2023-12-07 11:13:44.130907]: Generating fixed images for epoch 18 ...



[2023-12-07 11:13:44.597168]: Generating random images for epoch 18 ...



300/300 [=====] - 67s 223ms/step - loss: 488.1392 - reconstruction_error: 487.0739 - regularization_error: 1.0656 - val_loss: 498.2308 - val_reconstruction_error: 496.9227 - val_regularization_e
rror: 1.0646

Epoch 19/100

300/300 [=====] - ETA: 0s - loss: 488.0456 - reconstruction_error: 486.9803 - regularization_error: 1.0651

[2023-12-07 11:14:46.697558]: Generating fixed images for epoch 19 ...



[2023-12-07 11:14:47.159348]: Generating random images for epoch 19 ...



300/300 [=====] - 62s 206ms/step - loss: 488.0456 - reconstruction_error: 486.9803 - regularization_error: 1.0651 - val_loss: 499.3398 - val_reconstruction_error: 498.3638 - val_regularization_e
rror: 1.0808

Epoch 20/100

300/300 [=====] - ETA: 0s - loss: 487.3860 - reconstruction_error: 486.3166 - regularization_error: 1.0692

[2023-12-07 11:15:54.071273]: Generating fixed images for epoch 20 ...



[2023-12-07 11:15:54.946708]: Generating random images for epoch 20 ...



300/300 [=====] - 68s 226ms/step - loss: 487.3860 - reconstruction_error: 486.3166 - regularization_error: 1.0692 - val_loss: 495.7092 - val_reconstruction_error: 494.3192 - val_regularization_e

rror: 1.0807

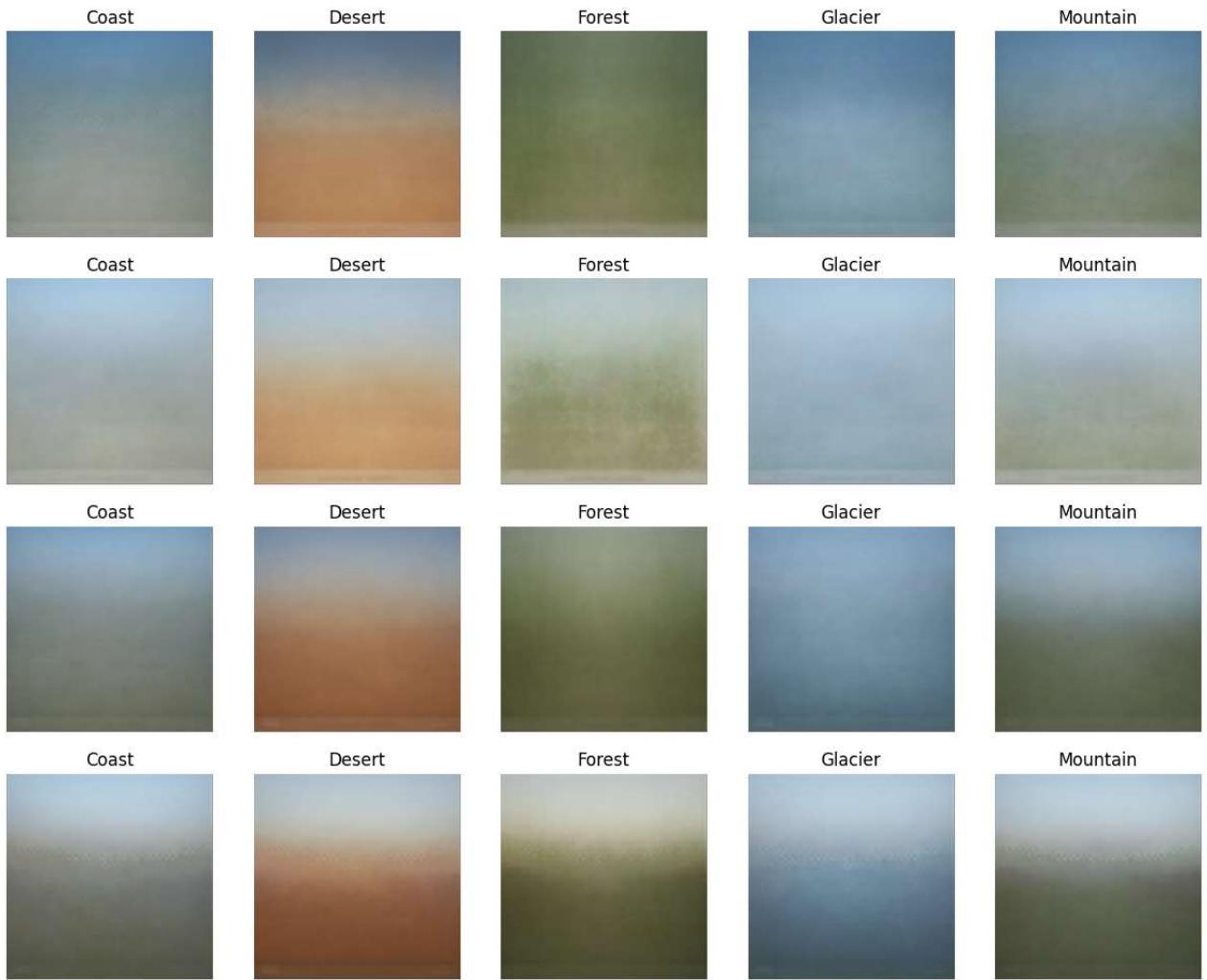
Epoch 21/100

300/300 [=====] - ETA: 0s - loss: 488.9502 - reconstruction_error: 487.8712 - regularization_error: 1.0788

[2023-12-07 11:17:00.348824]: Generating fixed images for epoch 21 ...



[2023-12-07 11:17:00.795908]: Generating random images for epoch 21 ...



300/300 [=====] - 66s 219ms/step - loss: 488.9502 - reconstruction_error: 487.8712 - regularization_error: 1.0788 - val_loss: 496.7578 - val_reconstruction_error: 495.3796 - val_regularization_error: 1.0785

Epoch 22/100

300/300 [=====] - ETA: 0s - loss: 486.5453 - reconstruction_error: 485.4783 - regularization_error: 1.0670

[2023-12-07 11:18:24.784197]: Generating fixed images for epoch 22 ...



[2023-12-07 11:18:25.262043]: Generating random images for epoch 22 ...



300/300 [=====] - 70s 231ms/step - loss: 486.5453 - reconstruction_error: 485.4783 - regularization_error: 1.0670 - val_loss: 500.9626 - val_reconstruction_error: 500.4813 - val_regularization_error: 1.0772

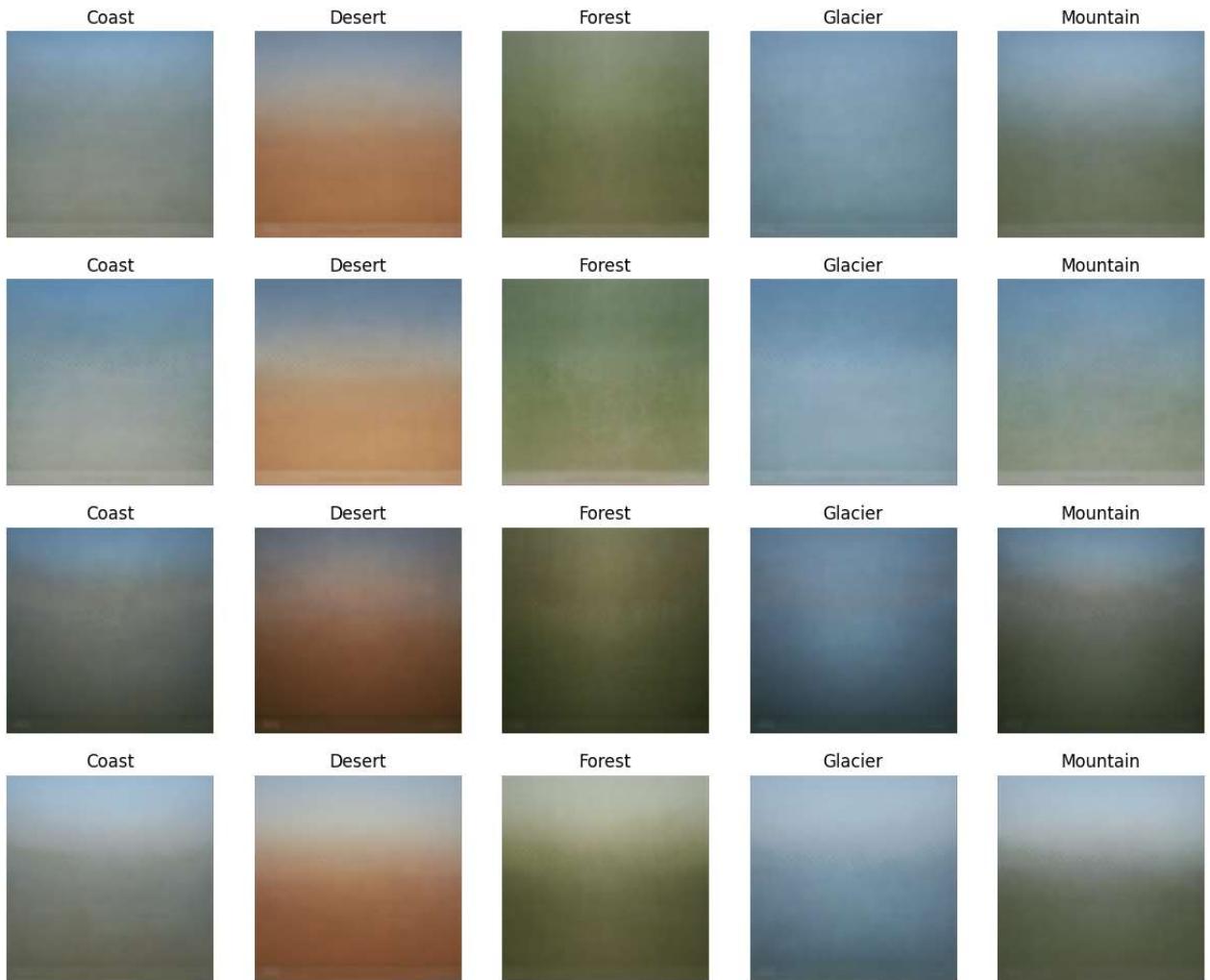
Epoch 23/100

300/300 [=====] - ETA: 0s - loss: 487.0072 - reconstruction_error: 485.9260 - regularization_error: 1.0812

[2023-12-07 11:19:30.440869]: Generating fixed images for epoch 23 ...



[2023-12-07 11:19:30.888974]: Generating random images for epoch 23 ...



300/300 [=====] - 65s 214ms/step - loss: 487.0072 - reconstruction_error: 485.9260 - regularization_error: 1.0812 - val_loss: 500.6386 - val_reconstruction_error: 499.7914 - val_regularization_error: 1.0707

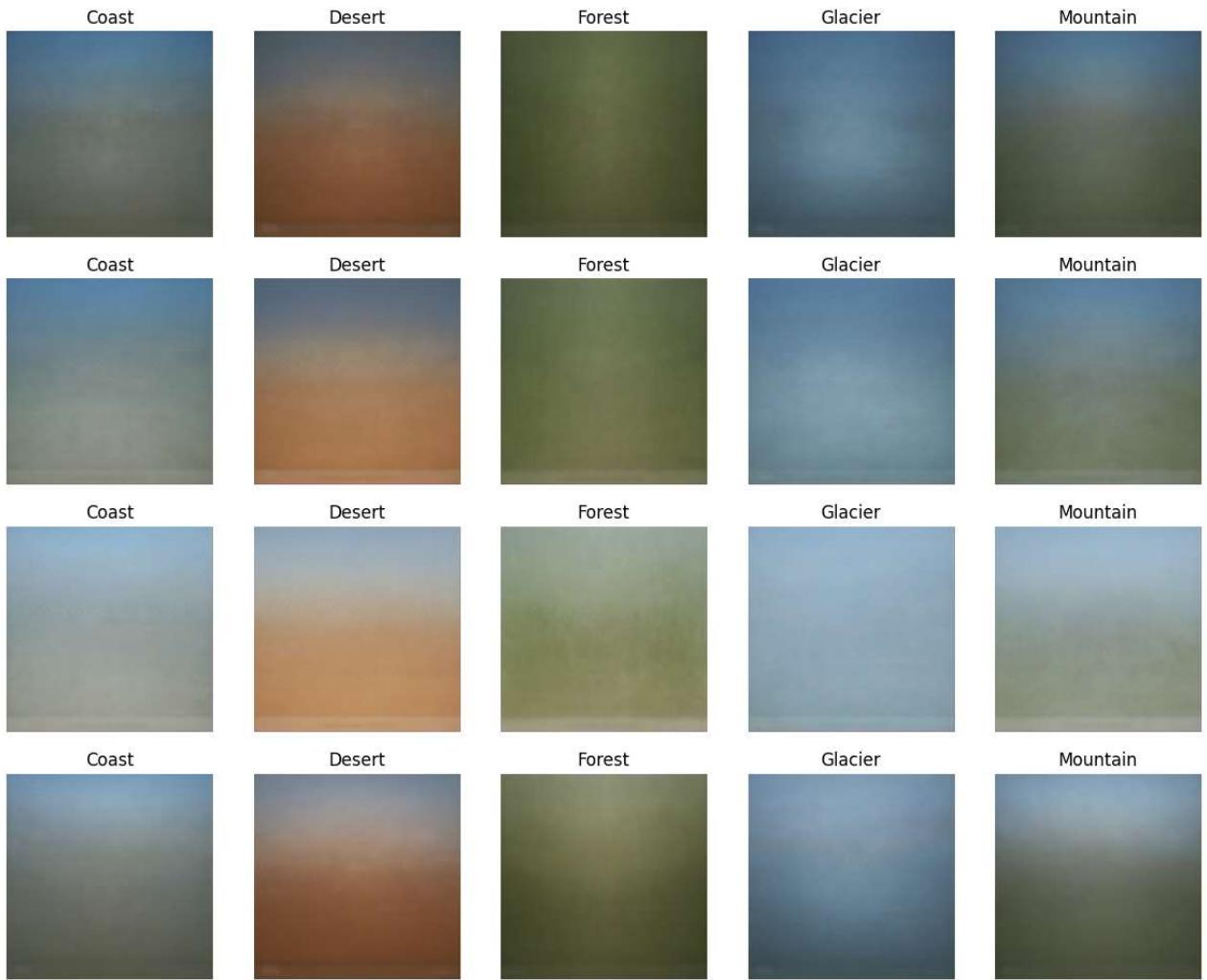
Epoch 24/100

300/300 [=====] - ETA: 0s - loss: 486.9321 - reconstruction_error: 485.8585 - regularization_error: 1.0737

[2023-12-07 11:20:34.790339]: Generating fixed images for epoch 24 ...



[2023-12-07 11:20:35.933512]: Generating random images for epoch 24 ...



300/300 [=====] - 65s 215ms/step - loss: 486.9321 - reconstruction_error: 485.8585 - regularization_error: 1.0737 - val_loss: 501.0308 - val_reconstruction_error: 499.6822 - val_regularization_error: 1.0725

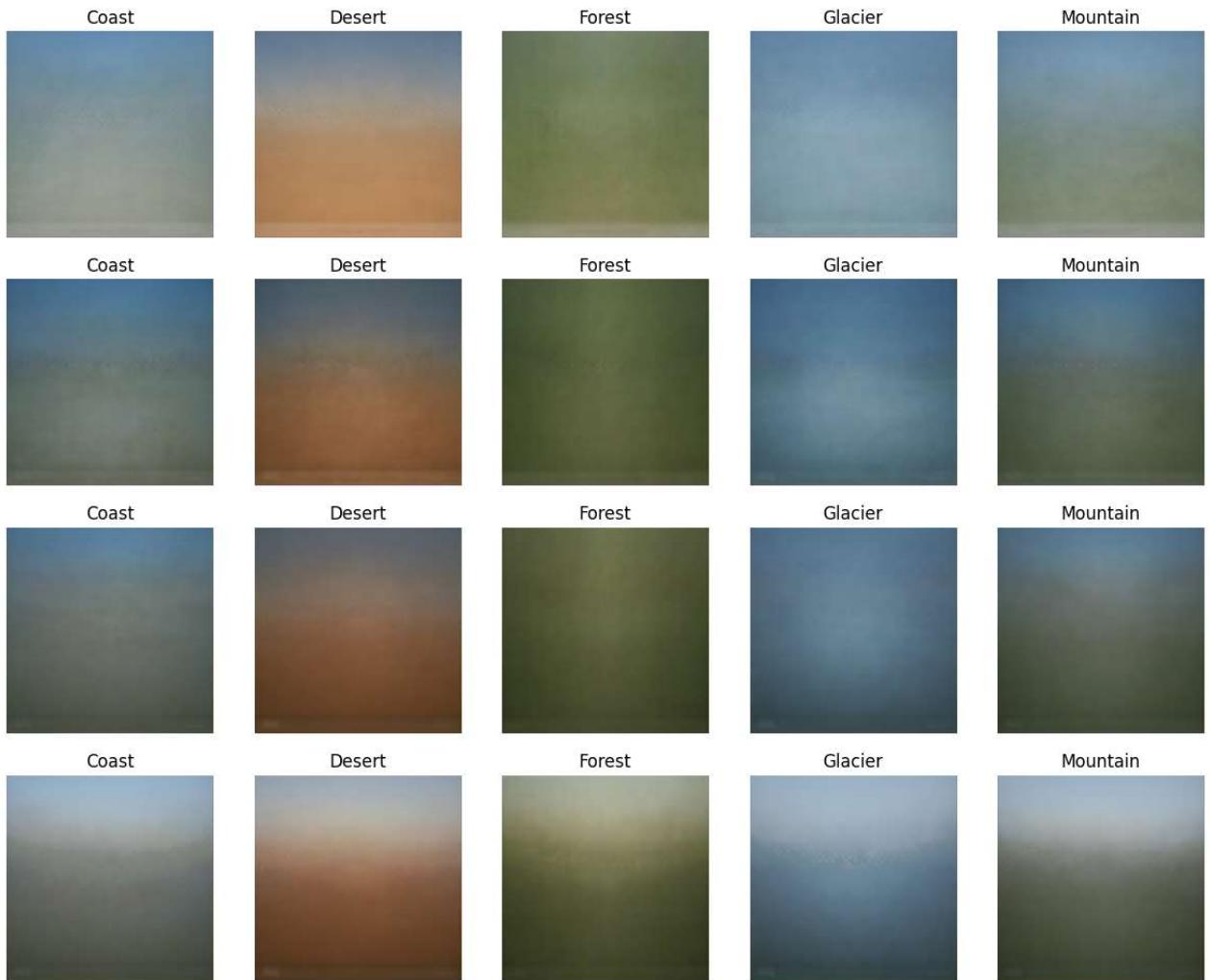
Epoch 25/100

300/300 [=====] - ETA: 0s - loss: 486.8101 - reconstruction_error: 485.7315 - regularization_error: 1.0787

[2023-12-07 11:21:39.702352]: Generating fixed images for epoch 25 ...



[2023-12-07 11:21:40.179424]: Generating random images for epoch 25 ...



300/300 [=====] - 64s 212ms/step - loss: 486.8101 - reconstruction_error: 485.7315 - regularization_error: 1.0787 - val_loss: 499.9688 - val_reconstruction_error: 498.4220 - val_regularization_error: 1.0781

Epoch 26/100

300/300 [=====] - ETA: 0s - loss: 485.9769 - reconstruction_error: 484.9021 - regularization_error: 1.0747

[2023-12-07 11:22:45.850711]: Generating fixed images for epoch 26 ...



[2023-12-07 11:22:46.952895]: Generating random images for epoch 26 ...



300/300 [=====] - 67s 223ms/step - loss: 485.9769 - reconstruction_error: 484.9021 - regularization_error: 1.0747 - val_loss: 494.4641 - val_reconstruction_error: 493.1471 - val_regularization_error: 1.0811

Epoch 27/100

300/300 [=====] - ETA: 0s - loss: 487.8880 - reconstruction_error: 486.8074 - regularization_error: 1.0806

[2023-12-07 11:23:49.965874]: Generating fixed images for epoch 27 ...



[2023-12-07 11:23:50.440569]: Generating random images for epoch 27 ...



300/300 [=====] - 63s 208ms/step - loss: 487.8880 - reconstruction_error: 486.8074 - regularization_error: 1.0806 - val_loss: 494.9523 - val_reconstruction_error: 494.2541 - val_regularization_error: 1.0760

Epoch 28/100

300/300 [=====] - ETA: 0s - loss: 484.3242 - reconstruction_error: 483.2465 - regularization_error: 1.0778

[2023-12-07 11:24:55.939480]: Generating fixed images for epoch 28 ...



[2023-12-07 11:24:56.411832]: Generating random images for epoch 28 ...



300/300 [=====] - 66s 215ms/step - loss: 484.3242 - reconstruction_error: 483.2465 - regularization_error: 1.0778 - val_loss: 494.2849 - val_reconstruction_error: 493.4748 - val_regularization_error: 1.0794

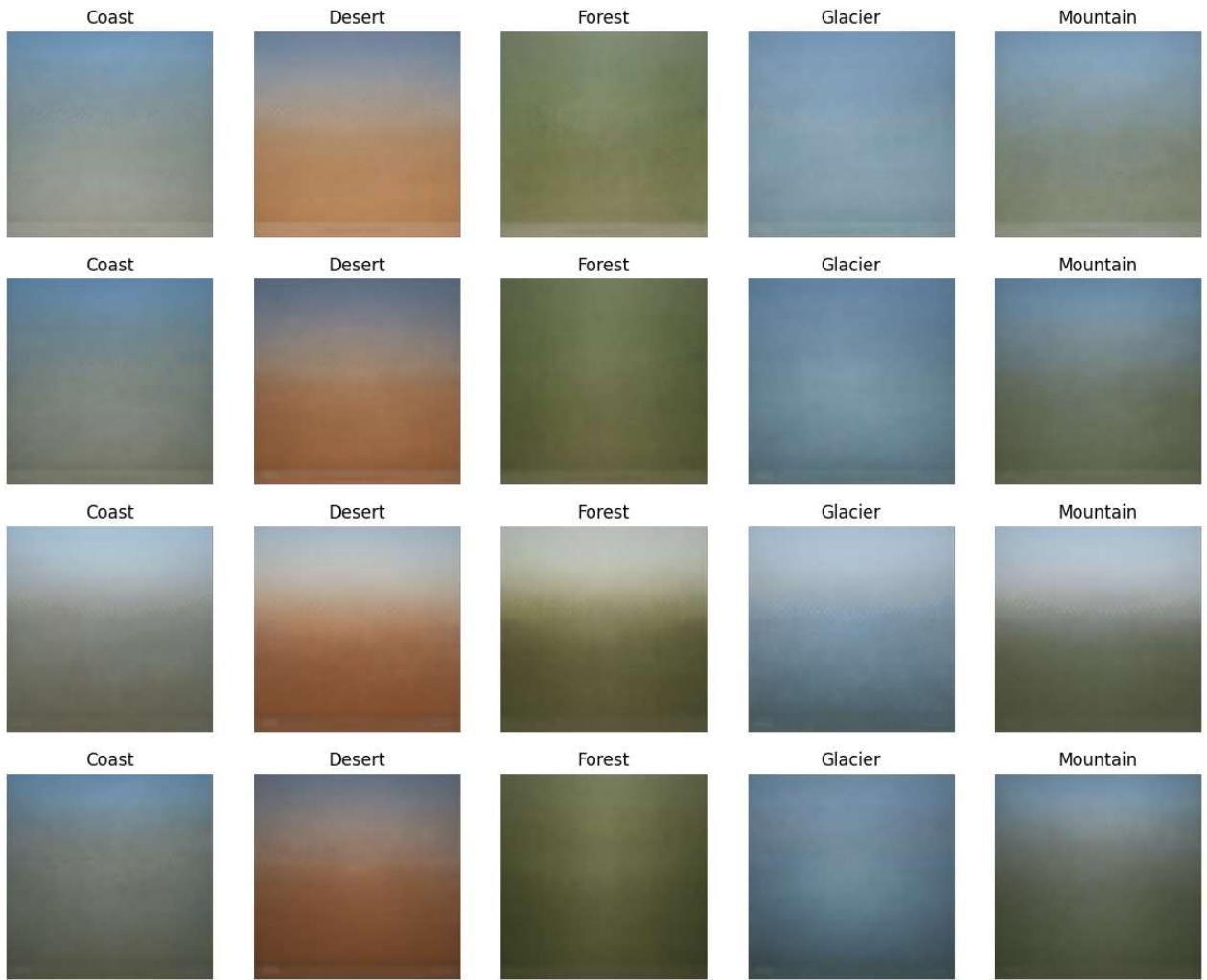
Epoch 29/100

300/300 [=====] - ETA: 0s - loss: 486.3980 - reconstruction_error: 485.3140 - regularization_error: 1.0837

[2023-12-07 11:26:03.729587]: Generating fixed images for epoch 29 ...



[2023-12-07 11:26:04.221365]: Generating random images for epoch 29 ...



300/300 [=====] - 68s 226ms/step - loss: 486.3980 - reconstruction_error: 485.3140 - regularization_error: 1.0837 - val_loss: 495.4694 - val_reconstruction_error: 494.1388 - val_regularization_error: 1.0754

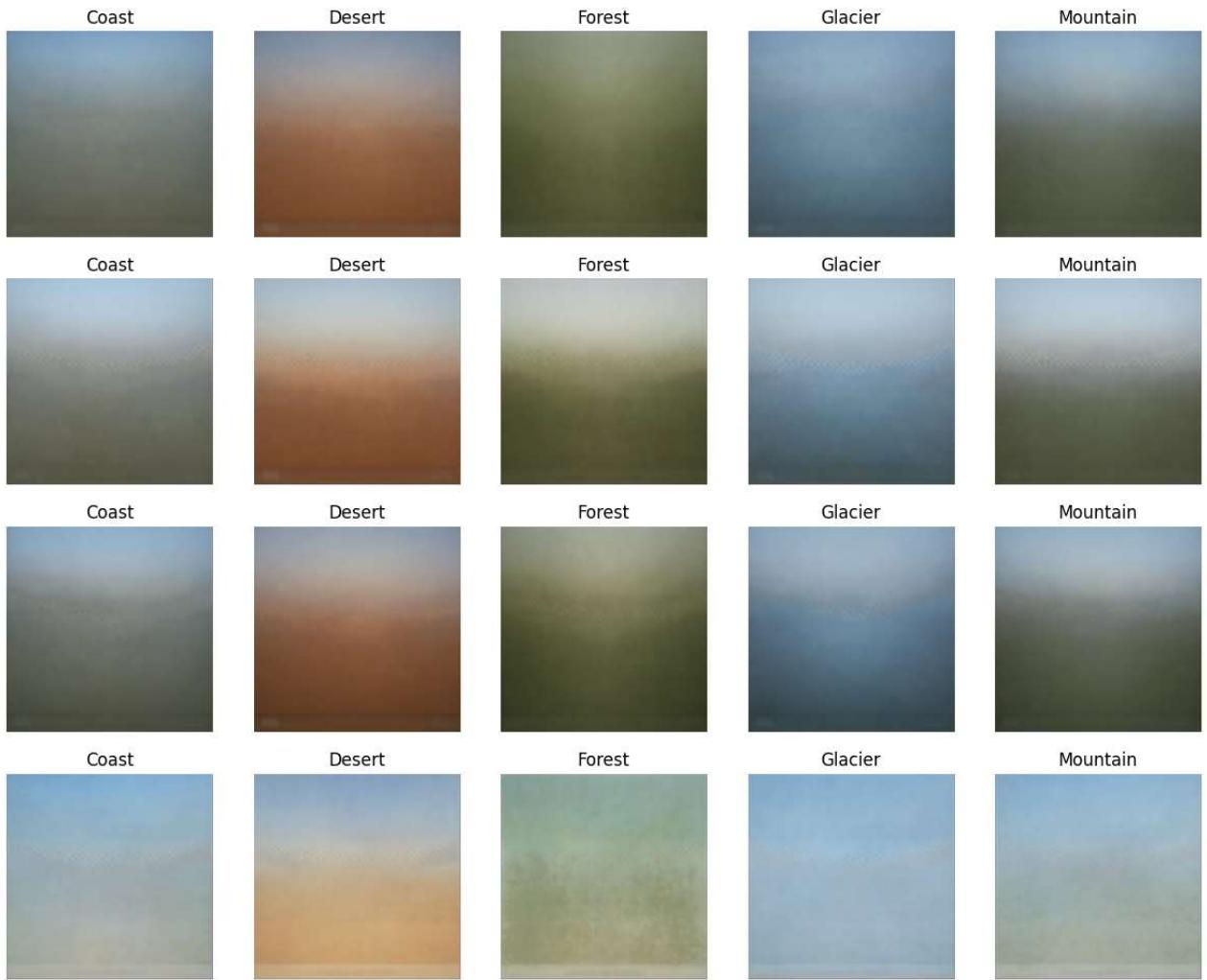
Epoch 30/100

300/300 [=====] - ETA: 0s - loss: 485.3426 - reconstruction_error: 484.2574 - regularization_error: 1.0851

[2023-12-07 11:27:01.222727]: Generating fixed images for epoch 30 ...



[2023-12-07 11:27:01.986735]: Generating random images for epoch 30 ...

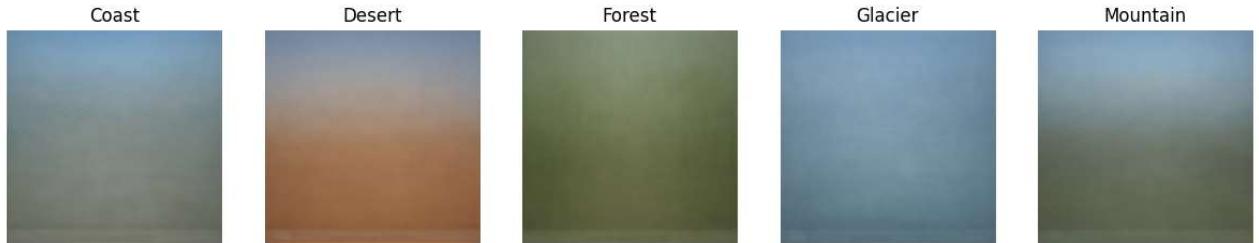


300/300 [=====] - 58s 191ms/step - loss: 485.3426 - reconstruction_error: 484.2574 - regularization_error: 1.0851 - val_loss: 492.4456 - val_reconstruction_error: 491.4020 - val_regularization_error: 1.0767

Epoch 31/100

300/300 [=====] - ETA: 0s - loss: 485.3791 - reconstruction_error: 484.2983 - regularization_error: 1.0807

[2023-12-07 11:28:04.573708]: Generating fixed images for epoch 31 ...



[2023-12-07 11:28:05.151333]: Generating random images for epoch 31 ...



300/300 [=====] - 63s 209ms/step - loss: 485.3791 - reconstruction_error: 484.2983 - regularization_error: 1.0807 - val_loss: 495.7426 - val_reconstruction_error: 495.0998 - val_regularization_error: 1.0930

Epoch 32/100

300/300 [=====] - ETA: 0s - loss: 485.2400 - reconstruction_error: 484.1508 - regularization_error: 1.0896

[2023-12-07 11:29:13.120744]: Generating fixed images for epoch 32 ...



[2023-12-07 11:29:13.982290]: Generating random images for epoch 32 ...



300/300 [=====] - 69s 228ms/step - loss: 485.2400 - reconstruction_error: 484.1508 - regularization_error: 1.0896 - val_loss: 490.6486 - val_reconstruction_error: 489.2518 - val_regularization_error: 1.1050

Epoch 33/100

300/300 [=====] - ETA: 0s - loss: 486.4024 - reconstruction_error: 485.3079 - regularization_error: 1.0945

[2023-12-07 11:30:26.370144]: Generating fixed images for epoch 33 ...



[2023-12-07 11:30:26.980628]: Generating random images for epoch 33 ...



300/300 [=====] - 73s 242ms/step - loss: 486.4024 - reconstruction_error: 485.3079 - regularization_error: 1.0945 - val_loss: 493.3922 - val_reconstruction_error: 492.0403 - val_regularization_error: 1.1004

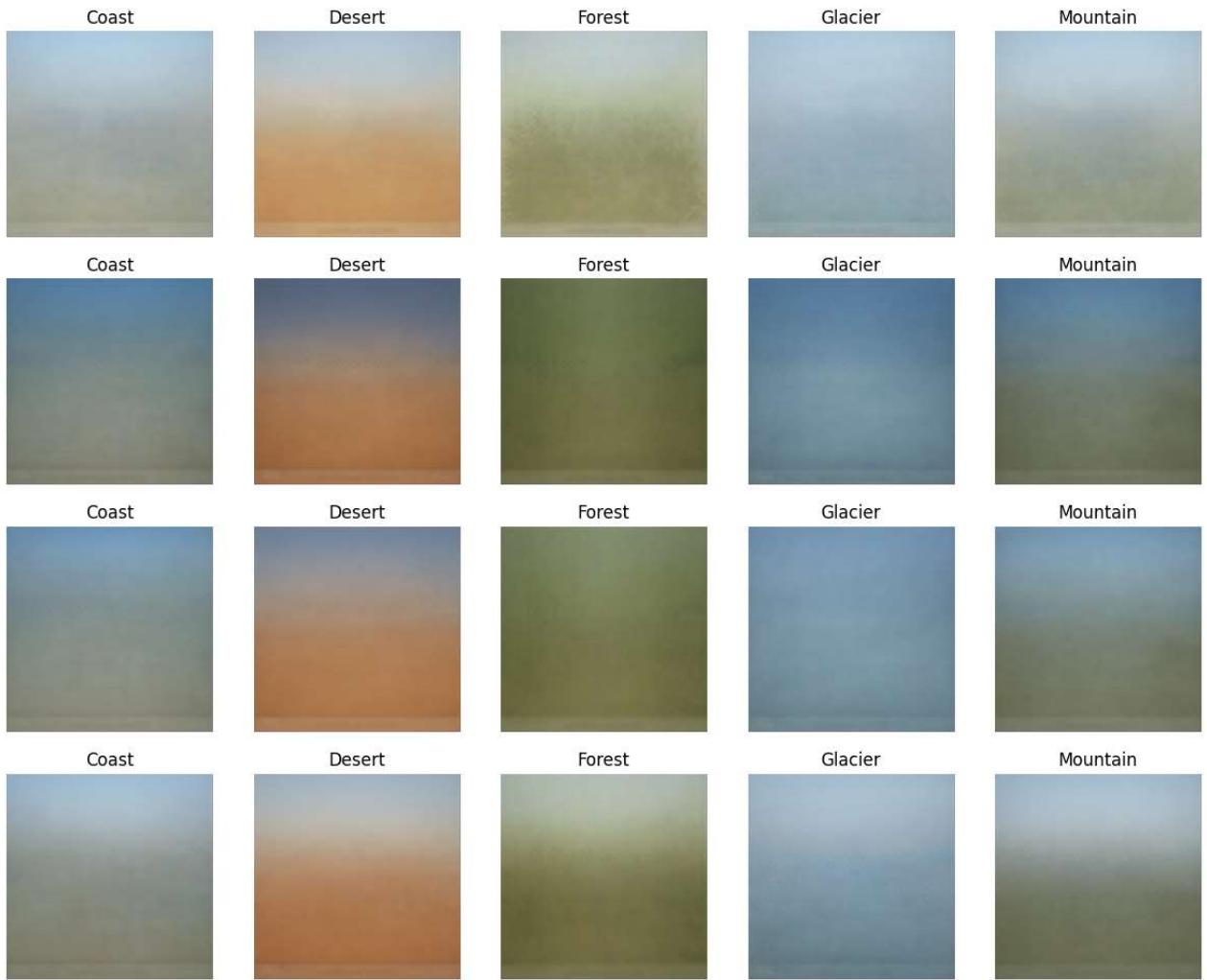
Epoch 34/100

300/300 [=====] - ETA: 0s - loss: 484.2859 - reconstruction_error: 483.1929 - regularization_error: 1.0928

[2023-12-07 11:31:42.391213]: Generating fixed images for epoch 34 ...



[2023-12-07 11:31:42.925267]: Generating random images for epoch 34 ...



300/300 [=====] - 67s 223ms/step - loss: 484.2859 - reconstruction_error: 483.1929 - regularization_error: 1.0928 - val_loss: 496.6061 - val_reconstruction_error: 495.2322 - val_regularization_error: 1.0983

Epoch 35/100

300/300 [=====] - ETA: 0s - loss: 485.8452 - reconstruction_error: 484.7568 - regularization_error: 1.0887

[2023-12-07 11:32:48.235620]: Generating fixed images for epoch 35 ...



[2023-12-07 11:32:48.993686]: Generating random images for epoch 35 ...



300/300 [=====] - 66s 218ms/step - loss: 485.8452 - reconstruction_error: 484.7568 - regularization_error: 1.0887 - val_loss: 493.5423 - val_reconstruction_error: 492.6555 - val_regularization_error: 1.0924

Epoch 36/100

300/300 [=====] - ETA: 0s - loss: 484.0411 - reconstruction_error: 482.9467 - regularization_error: 1.0945

[2023-12-07 11:33:51.585387]: Generating fixed images for epoch 36 ...



[2023-12-07 11:33:52.223918]: Generating random images for epoch 36 ...



300/300 [=====] - 64s 212ms/step - loss: 484.0411 - reconstruction_error: 482.9467 - regularization_error: 1.0945 - val_loss: 500.0833 - val_reconstruction_error: 499.0328 - val_regularization_error: 1.0948

Epoch 37/100

300/300 [=====] - ETA: 0s - loss: 483.4777 - reconstruction_error: 482.3858 - regularization_error: 1.0916

[2023-12-07 11:34:58.663842]: Generating fixed images for epoch 37 ...



[2023-12-07 11:34:59.244314]: Generating random images for epoch 37 ...



300/300 [=====] - 66s 218ms/step - loss: 483.4777 - reconstruction_error: 482.3858 - regularization_error: 1.0916 - val_loss: 498.4398 - val_reconstruction_error: 496.8145 - val_regularization_error: 1.0796

Epoch 38/100

300/300 [=====] - ETA: 0s - loss: 484.2844 - reconstruction_error: 483.1883 - regularization_error: 1.0964

[2023-12-07 11:36:06.385540]: Generating fixed images for epoch 38 ...



[2023-12-07 11:36:07.136673]: Generating random images for epoch 38 ...



300/300 [=====] - 69s 229ms/step - loss: 484.2844 - reconstruction_error: 483.1883 - regularization_error: 1.0964 - val_loss: 493.6090 - val_reconstruction_error: 492.4403 - val_regularization_error: 1.0949

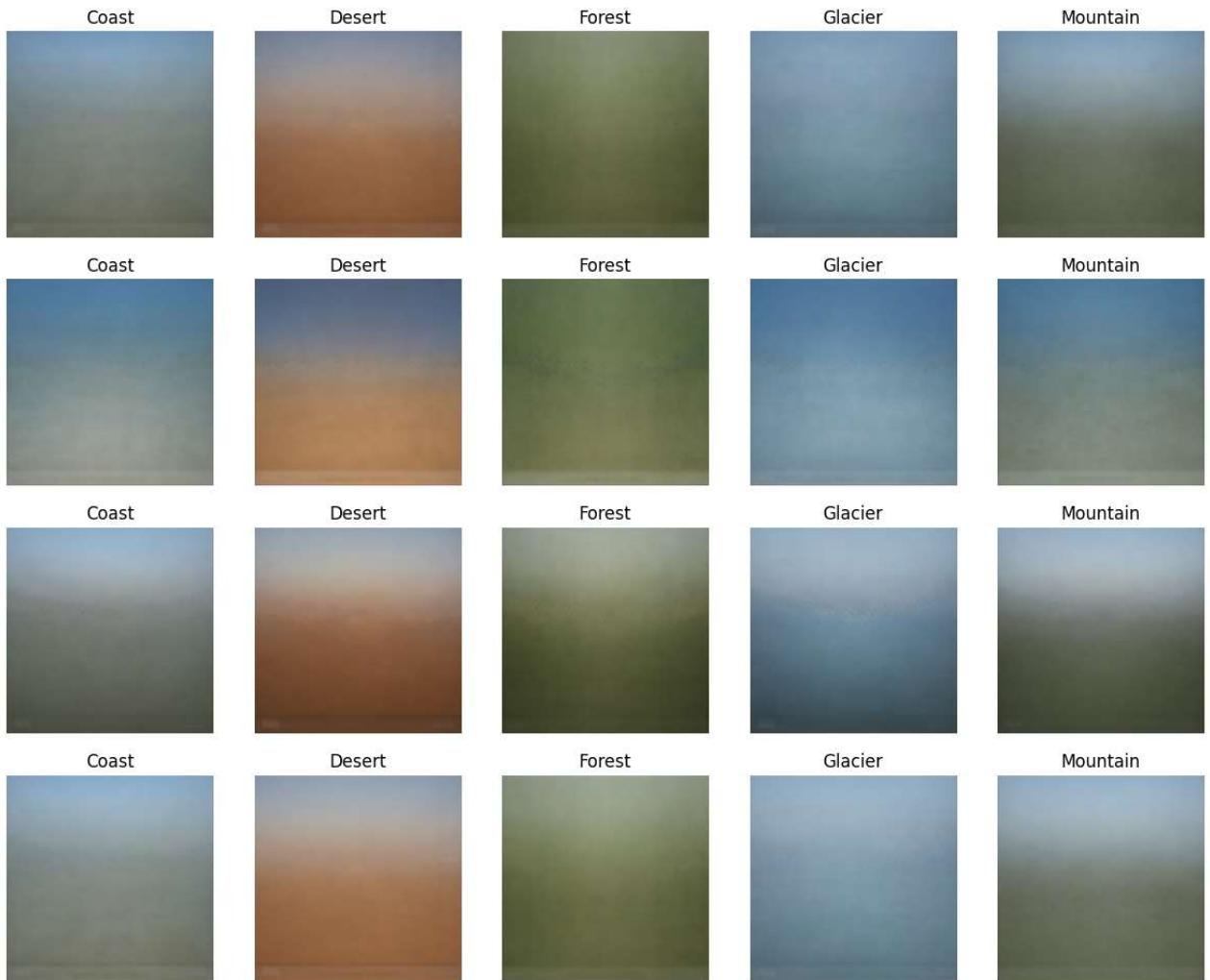
Epoch 39/100

300/300 [=====] - ETA: 0s - loss: 484.6701 - reconstruction_error: 483.5809 - regularization_error: 1.0888

[2023-12-07 11:37:17.204412]: Generating fixed images for epoch 39 ...



[2023-12-07 11:37:17.995154]: Generating random images for epoch 39 ...



300/300 [=====] - 70s 232ms/step - loss: 484.6701 - reconstruction_error: 483.5809 - regularization_error: 1.0888 - val_loss: 492.9113 - val_reconstruction_error: 491.6326 - val_regularization_e
rror: 1.0896

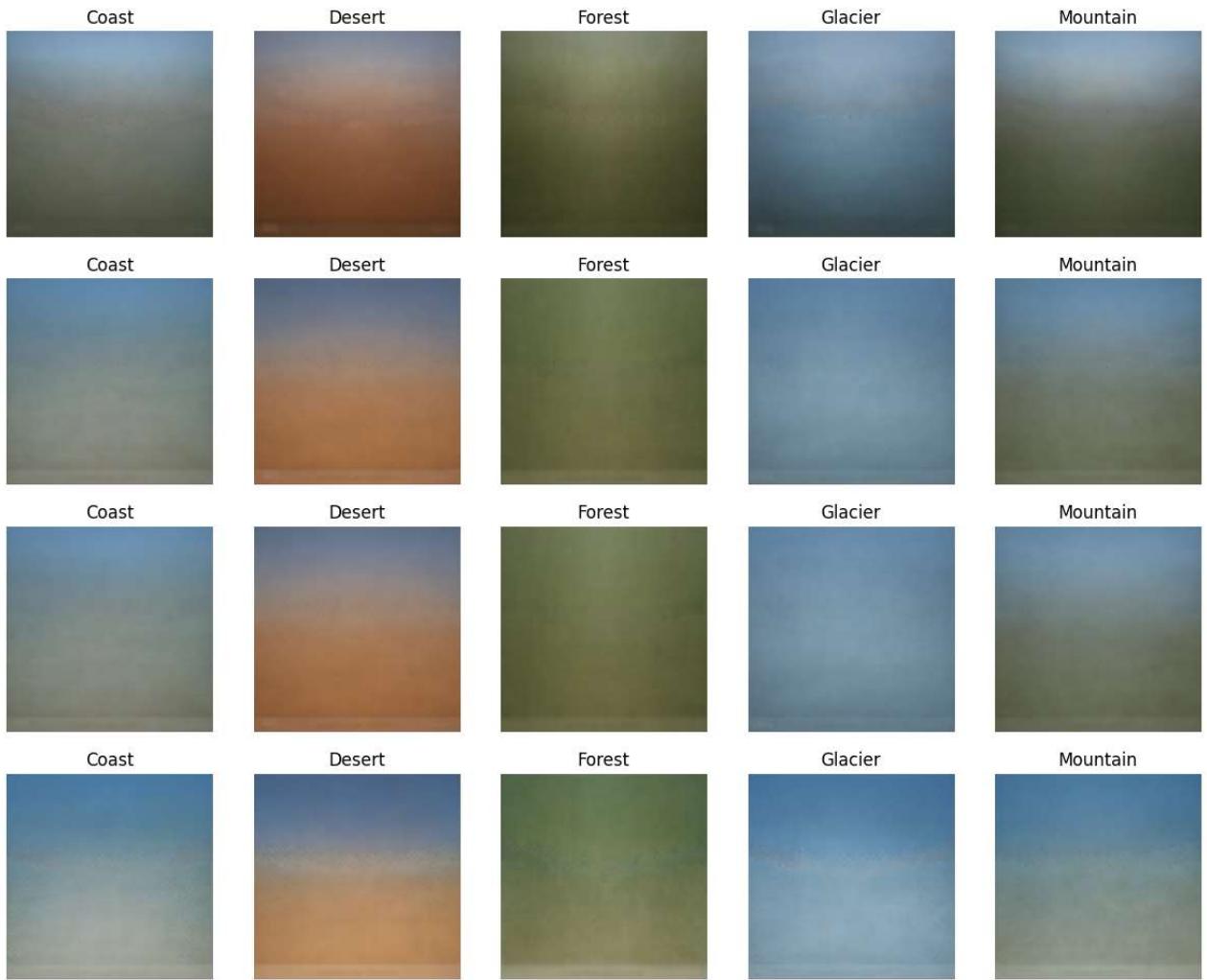
Epoch 40/100

300/300 [=====] - ETA: 0s - loss: 484.2155 - reconstruction_error: 483.1204 - regularization_error: 1.0948

[2023-12-07 11:38:17.793705]: Generating fixed images for epoch 40 ...



[2023-12-07 11:38:18.289536]: Generating random images for epoch 40 ...



300/300 [=====] - 60s 199ms/step - loss: 484.2155 - reconstruction_error: 483.1204 - regularization_error: 1.0948 - val_loss: 493.6722 - val_reconstruction_error: 492.4698 - val_regularization_error: 1.1084

Epoch 41/100

300/300 [=====] - ETA: 0s - loss: 482.9751 - reconstruction_error: 481.8763 - regularization_error: 1.0986

[2023-12-07 11:39:24.375314]: Generating fixed images for epoch 41 ...



[2023-12-07 11:39:24.925480]: Generating random images for epoch 41 ...



300/300 [=====] - 67s 221ms/step - loss: 482.9751 - reconstruction_error: 481.8763 - regularization_error: 1.0986 - val_loss: 493.1975 - val_reconstruction_error: 492.3133 - val_regularization_error: 1.0951

Epoch 42/100

300/300 [=====] - ETA: 0s - loss: 483.5822 - reconstruction_error: 482.4803 - regularization_error: 1.1019

[2023-12-07 11:40:28.532804]: Generating fixed images for epoch 42 ...



[2023-12-07 11:40:29.061843]: Generating random images for epoch 42 ...



300/300 [=====] - 65s 215ms/step - loss: 483.5822 - reconstruction_error: 482.4803 - regularization_error: 1.1019 - val_loss: 493.9232 - val_reconstruction_error: 492.8529 - val_regularization_error: 1.0996

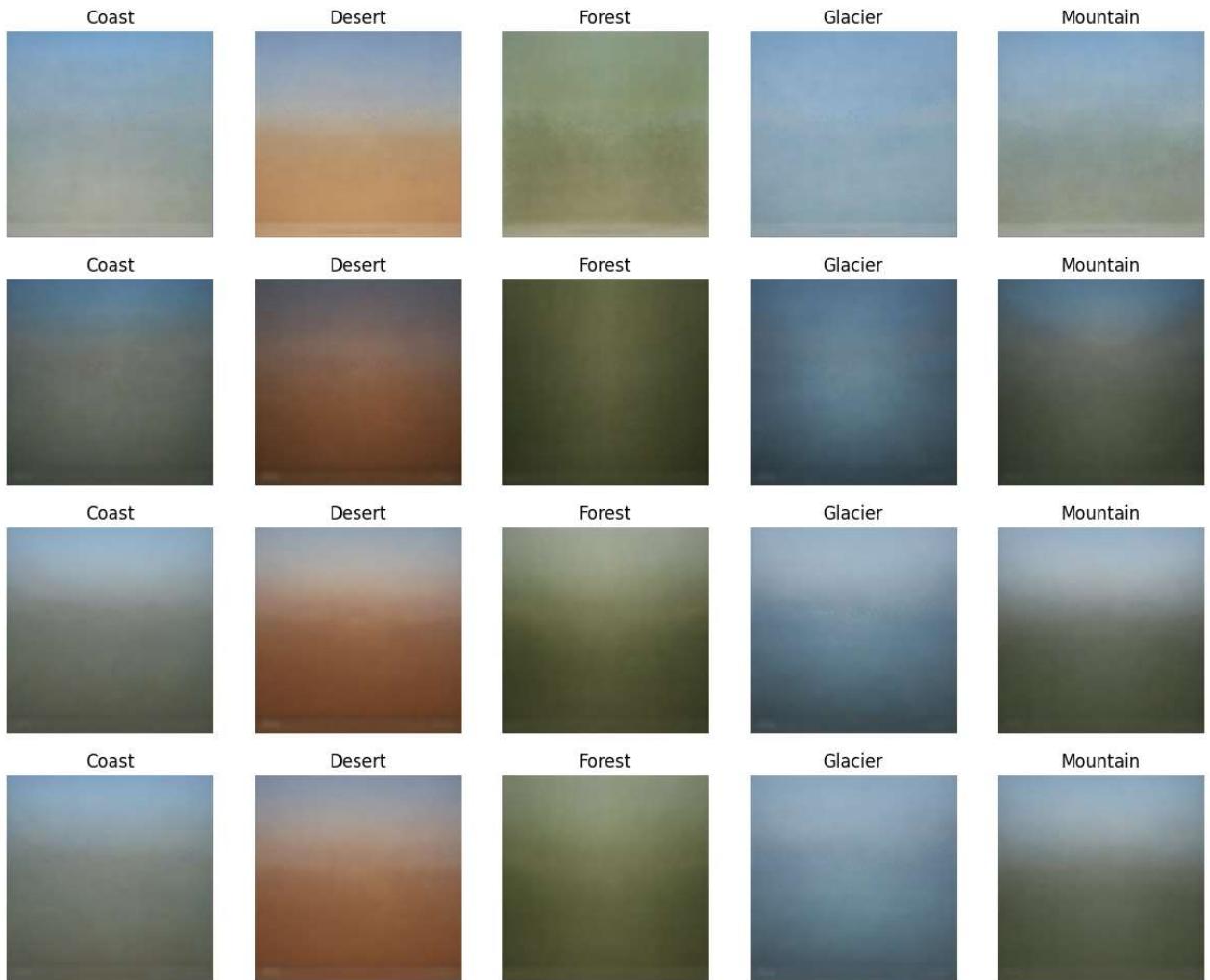
Epoch 43/100

300/300 [=====] - ETA: 0s - loss: 483.6758 - reconstruction_error: 482.5778 - regularization_error: 1.0980

[2023-12-07 11:41:34.795831]: Generating fixed images for epoch 43 ...



[2023-12-07 11:41:35.272115]: Generating random images for epoch 43 ...



300/300 [=====] - 65s 217ms/step - loss: 483.6758 - reconstruction_error: 482.5778 - regularization_error: 1.0980 - val_loss: 498.3918 - val_reconstruction_error: 497.2393 - val_regularization_error: 1.0969

Epoch 44/100

300/300 [=====] - ETA: 0s - loss: 484.7998 - reconstruction_error: 483.6973 - regularization_error: 1.1025

[2023-12-07 11:42:35.769035]: Generating fixed images for epoch 44 ...



[2023-12-07 11:42:36.305213]: Generating random images for epoch 44 ...



300/300 [=====] - 61s 203ms/step - loss: 484.7998 - reconstruction_error: 483.6973 - regularization_error: 1.1025 - val_loss: 492.9111 - val_reconstruction_error: 491.4729 - val_regularization_error: 1.1123

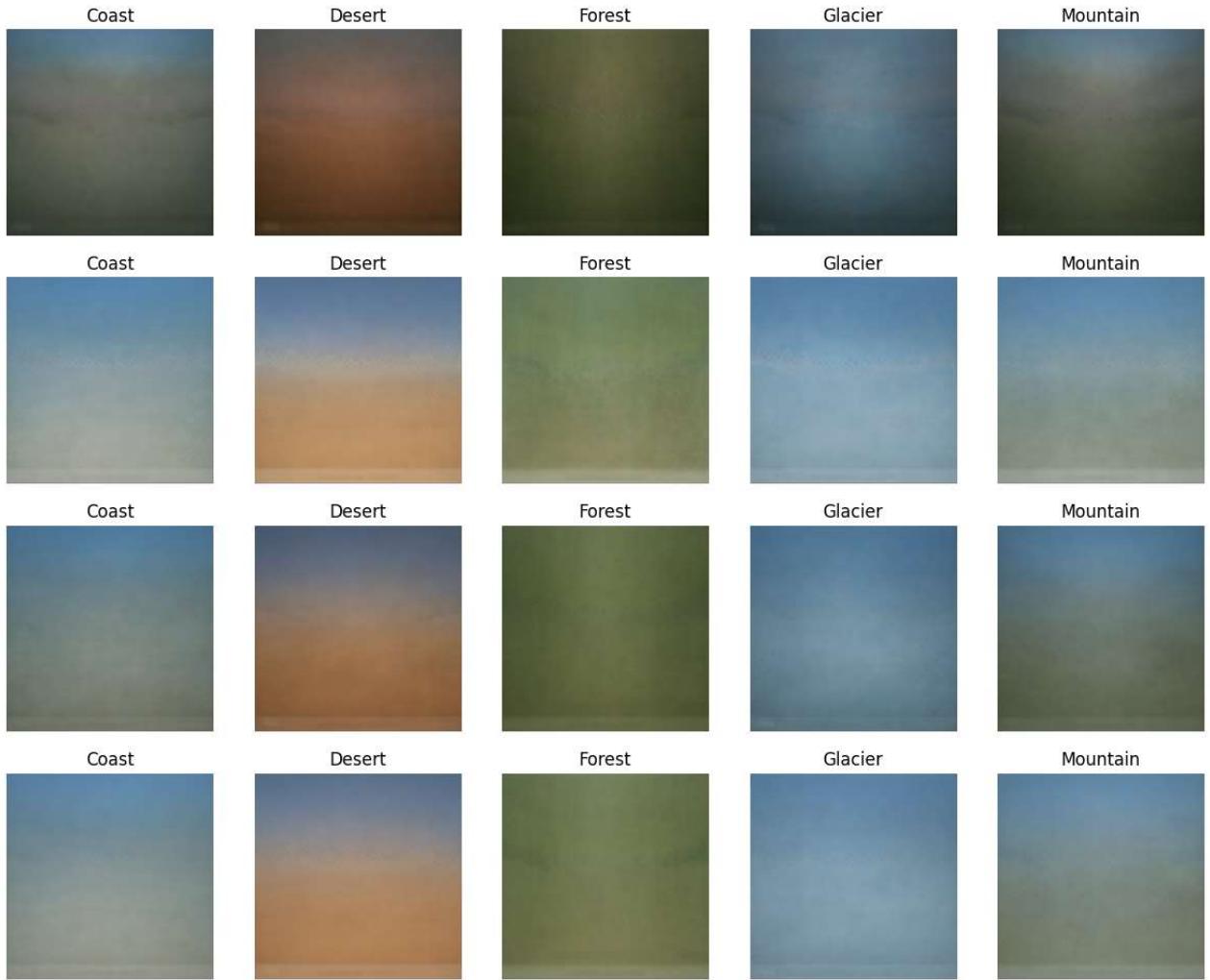
Epoch 45/100

300/300 [=====] - ETA: 0s - loss: 482.5515 - reconstruction_error: 481.4518 - regularization_error: 1.0998

[2023-12-07 11:43:38.926160]: Generating fixed images for epoch 45 ...



[2023-12-07 11:43:39.948254]: Generating random images for epoch 45 ...



300/300 [=====] - 64s 212ms/step - loss: 482.5515 - reconstruction_error: 481.4518 - regularization_error: 1.0998 - val_loss: 492.1954 - val_reconstruction_error: 490.6373 - val_regularization_error: 1.0966

Epoch 46/100

300/300 [=====] - ETA: 0s - loss: 482.6992 - reconstruction_error: 481.6026 - regularization_error: 1.0968

[2023-12-07 11:44:43.844045]: Generating fixed images for epoch 46 ...



[2023-12-07 11:44:44.978501]: Generating random images for epoch 46 ...



300/300 [=====] - 65s 215ms/step - loss: 482.6992 - reconstruction_error: 481.6026 - regularization_error: 1.0968 - val_loss: 491.8761 - val_reconstruction_error: 490.7445 - val_regularization_error: 1.0999

Epoch 47/100

300/300 [=====] - ETA: 0s - loss: 484.9738 - reconstruction_error: 483.8732 - regularization_error: 1.1006

[2023-12-07 11:45:48.956902]: Generating fixed images for epoch 47 ...



[2023-12-07 11:45:49.496683]: Generating random images for epoch 47 ...



300/300 [=====] - 65s 214ms/step - loss: 484.9738 - reconstruction_error: 483.8732 - regularization_error: 1.1006 - val_loss: 491.5454 - val_reconstruction_error: 490.6194 - val_regularization_error: 1.1060

Epoch 48/100

300/300 [=====] - ETA: 0s - loss: 483.0187 - reconstruction_error: 481.9185 - regularization_error: 1.1006

[2023-12-07 11:46:56.433289]: Generating fixed images for epoch 48 ...



[2023-12-07 11:46:56.932154]: Generating random images for epoch 48 ...



300/300 [=====] - 67s 222ms/step - loss: 483.0187 - reconstruction_error: 481.9185 - regularization_error: 1.1006 - val_loss: 492.2556 - val_reconstruction_error: 491.2605 - val_regularization_error: 1.1019

Epoch 49/100

300/300 [=====] - ETA: 0s - loss: 482.2288 - reconstruction_error: 481.1237 - regularization_error: 1.1053

[2023-12-07 11:48:00.030583]: Generating fixed images for epoch 49 ...



[2023-12-07 11:48:00.946873]: Generating random images for epoch 49 ...



300/300 [=====] - 64s 211ms/step - loss: 482.2288 - reconstruction_error: 481.1237 - regularization_error: 1.1053 - val_loss: 493.4894 - val_reconstruction_error: 492.3260 - val_regularization_error: 1.0980

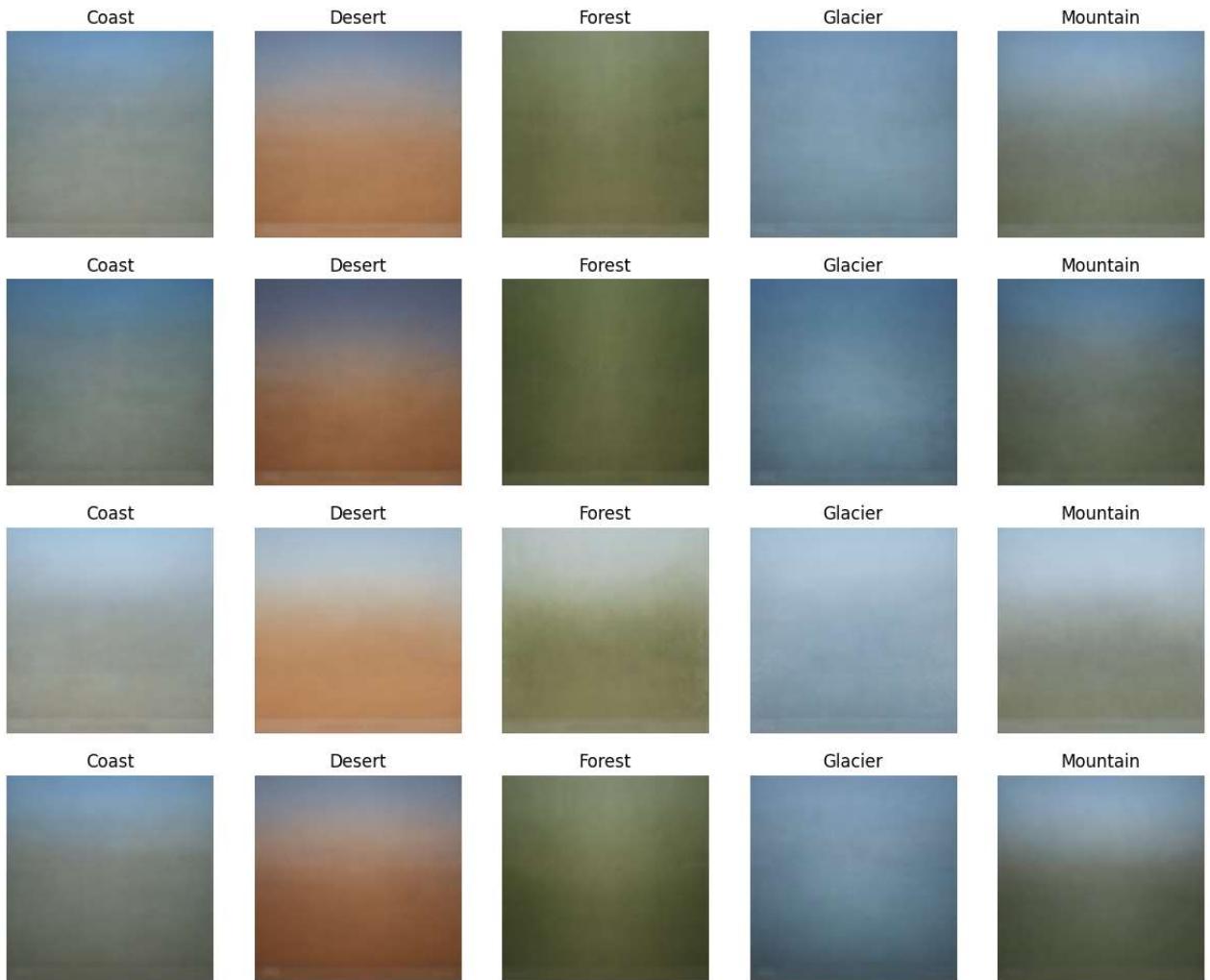
Epoch 50/100

300/300 [=====] - ETA: 0s - loss: 482.7250 - reconstruction_error: 481.6207 - regularization_error: 1.1043

[2023-12-07 11:49:03.054394]: Generating fixed images for epoch 50 ...



[2023-12-07 11:49:03.533451]: Generating random images for epoch 50 ...



300/300 [=====] - 63s 209ms/step - loss: 482.7250 - reconstruction_error: 481.6207 - regularization_error: 1.1043 - val_loss: 490.7984 - val_reconstruction_error: 489.5345 - val_regularization_error: 1.1094

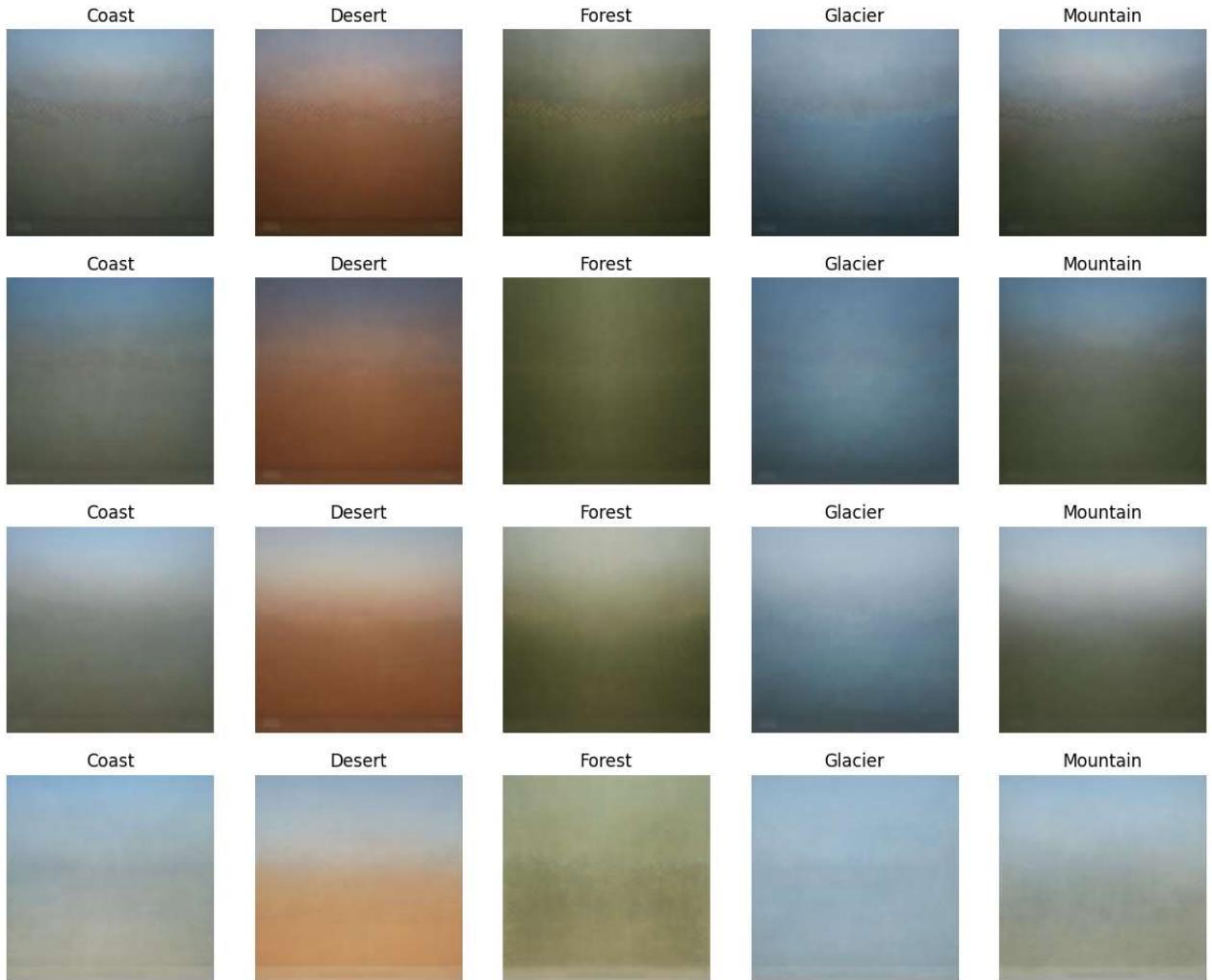
Epoch 51/100

300/300 [=====] - ETA: 0s - loss: 483.6674 - reconstruction_error: 482.5638 - regularization_error: 1.1038

[2023-12-07 11:50:25.522605]: Generating fixed images for epoch 51 ...



[2023-12-07 11:50:26.012895]: Generating random images for epoch 51 ...



300/300 [=====] - 63s 210ms/step - loss: 483.6674 - reconstruction_error: 482.5638 - regularization_error: 1.1038 - val_loss: 494.1481 - val_reconstruction_error: 492.6623 - val_regularization_error: 1.0986

Epoch 52/100

300/300 [=====] - ETA: 0s - loss: 482.2445 - reconstruction_error: 481.1424 - regularization_error: 1.1026

[2023-12-07 11:51:31.420718]: Generating fixed images for epoch 52 ...



[2023-12-07 11:51:31.917438]: Generating random images for epoch 52 ...



300/300 [=====] - 65s 217ms/step - loss: 482.2445 - reconstruction_error: 481.1424 - regularization_error: 1.1026 - val_loss: 493.1313 - val_reconstruction_error: 491.7182 - val_regularization_error: 1.0952

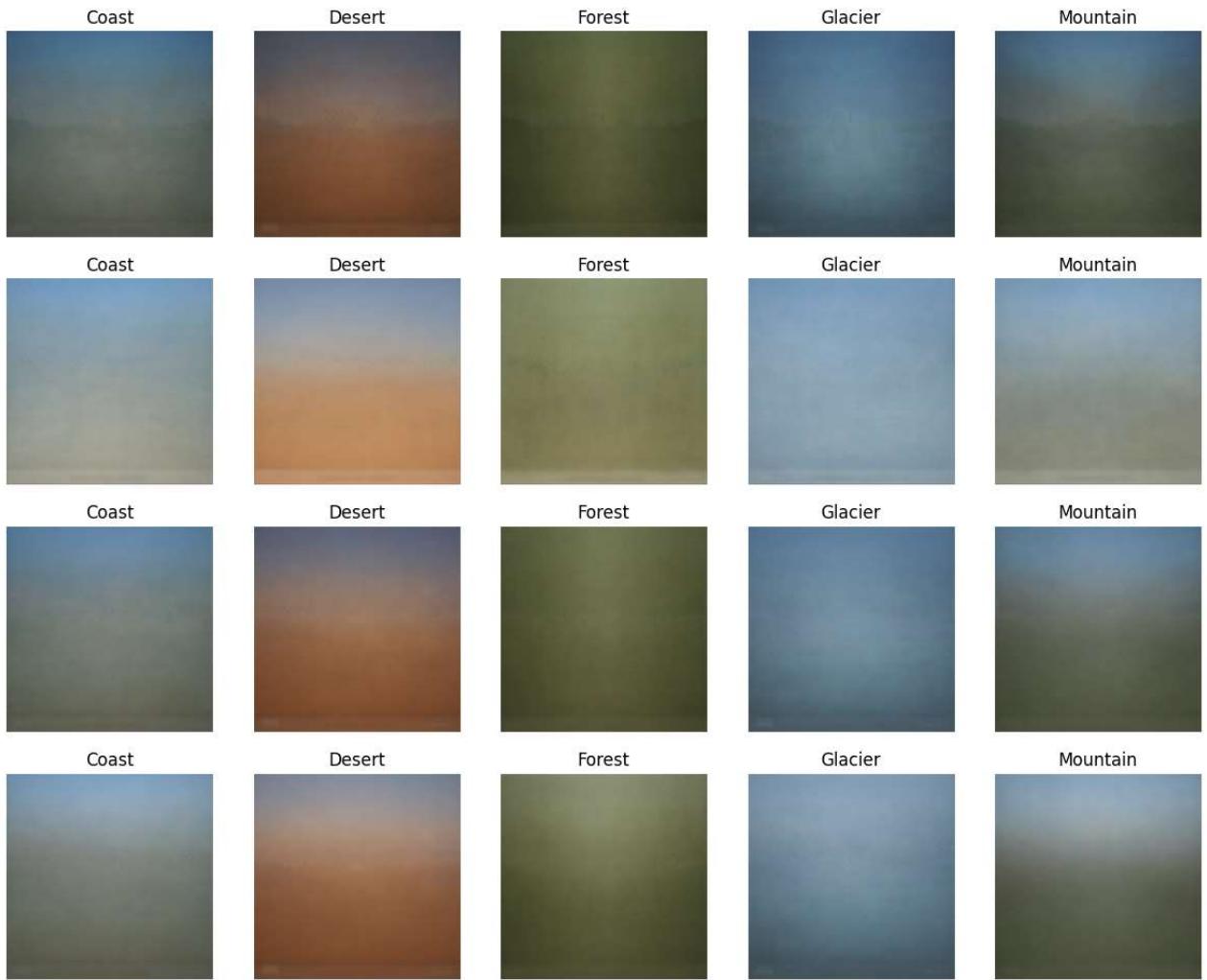
Epoch 53/100

300/300 [=====] - ETA: 0s - loss: 481.1406 - reconstruction_error: 480.0387 - regularization_error: 1.1020

[2023-12-07 11:52:34.745937]: Generating fixed images for epoch 53 ...



[2023-12-07 11:52:35.274443]: Generating random images for epoch 53 ...



300/300 [=====] - 64s 211ms/step - loss: 481.1406 - reconstruction_error: 480.0387 - regularization_error: 1.1020 - val_loss: 490.9990 - val_reconstruction_error: 490.0181 - val_regularization_error: 1.0994

Epoch 54/100

300/300 [=====] - ETA: 0s - loss: 481.3740 - reconstruction_error: 480.2692 - regularization_error: 1.1045

[2023-12-07 11:53:40.591977]: Generating fixed images for epoch 54 ...



[2023-12-07 11:53:41.057338]: Generating random images for epoch 54 ...



300/300 [=====] - 66s 219ms/step - loss: 481.3740 - reconstruction_error: 480.2692 - regularization_error: 1.1045 - val_loss: 495.2395 - val_reconstruction_error: 494.2430 - val_regularization_error: 1.1150

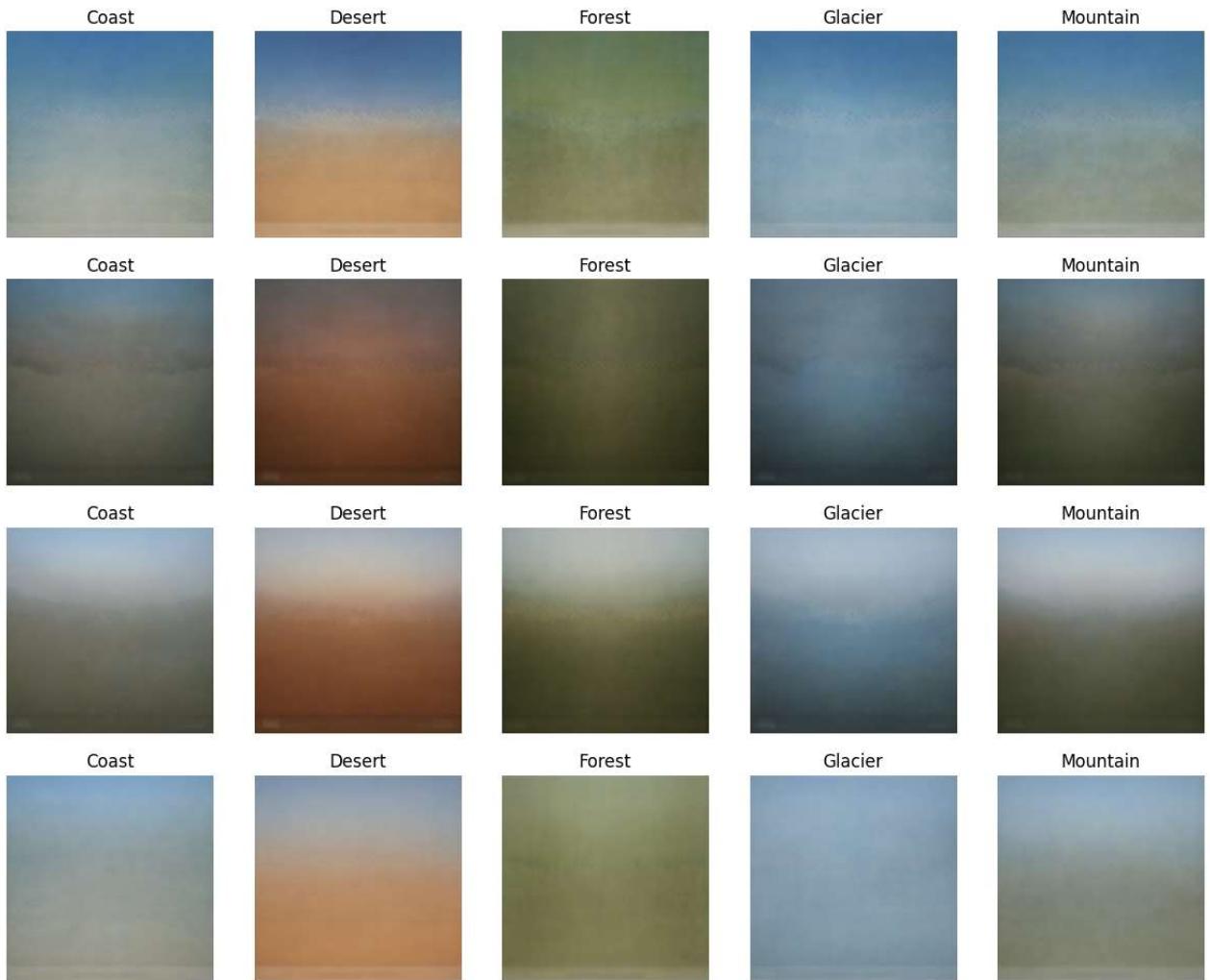
Epoch 55/100

300/300 [=====] - ETA: 0s - loss: 482.6332 - reconstruction_error: 481.5230 - regularization_error: 1.1102

[2023-12-07 11:54:41.005203]: Generating fixed images for epoch 55 ...



[2023-12-07 11:54:41.462035]: Generating random images for epoch 55 ...



300/300 [=====] - 60s 198ms/step - loss: 482.6332 - reconstruction_error: 481.5230 - regularization_error: 1.1102 - val_loss: 494.0533 - val_reconstruction_error: 492.9493 - val_regularization_error: 1.0985

Epoch 56/100

300/300 [=====] - ETA: 0s - loss: 482.9303 - reconstruction_error: 481.8241 - regularization_error: 1.1060

[2023-12-07 11:55:40.927961]: Generating fixed images for epoch 56 ...



[2023-12-07 11:55:41.954327]: Generating random images for epoch 56 ...



300/300 [=====] - 61s 200ms/step - loss: 482.9303 - reconstruction_error: 481.8241 - regularization_error: 1.1060 - val_loss: 490.0468 - val_reconstruction_error: 488.7667 - val_regularization_error: 1.1058

Epoch 57/100

300/300 [=====] - ETA: 0s - loss: 482.1166 - reconstruction_error: 481.0103 - regularization_error: 1.1061

[2023-12-07 11:56:46.978113]: Generating fixed images for epoch 57 ...



[2023-12-07 11:56:47.428622]: Generating random images for epoch 57 ...



300/300 [=====] - 65s 217ms/step - loss: 482.1166 - reconstruction_error: 481.0103 - regularization_error: 1.1061 - val_loss: 492.8586 - val_reconstruction_error: 491.6671 - val_regularization_error: 1.1098

Epoch 58/100

300/300 [=====] - ETA: 0s - loss: 482.4621 - reconstruction_error: 481.3564 - regularization_error: 1.1057

[2023-12-07 11:57:53.604088]: Generating fixed images for epoch 58 ...



[2023-12-07 11:57:54.201501]: Generating random images for epoch 58 ...



300/300 [=====] - 67s 223ms/step - loss: 482.4621 - reconstruction_error: 481.3564 - regularization_error: 1.1057 - val_loss: 497.0516 - val_reconstruction_error: 495.9970 - val_regularization_error: 1.1031

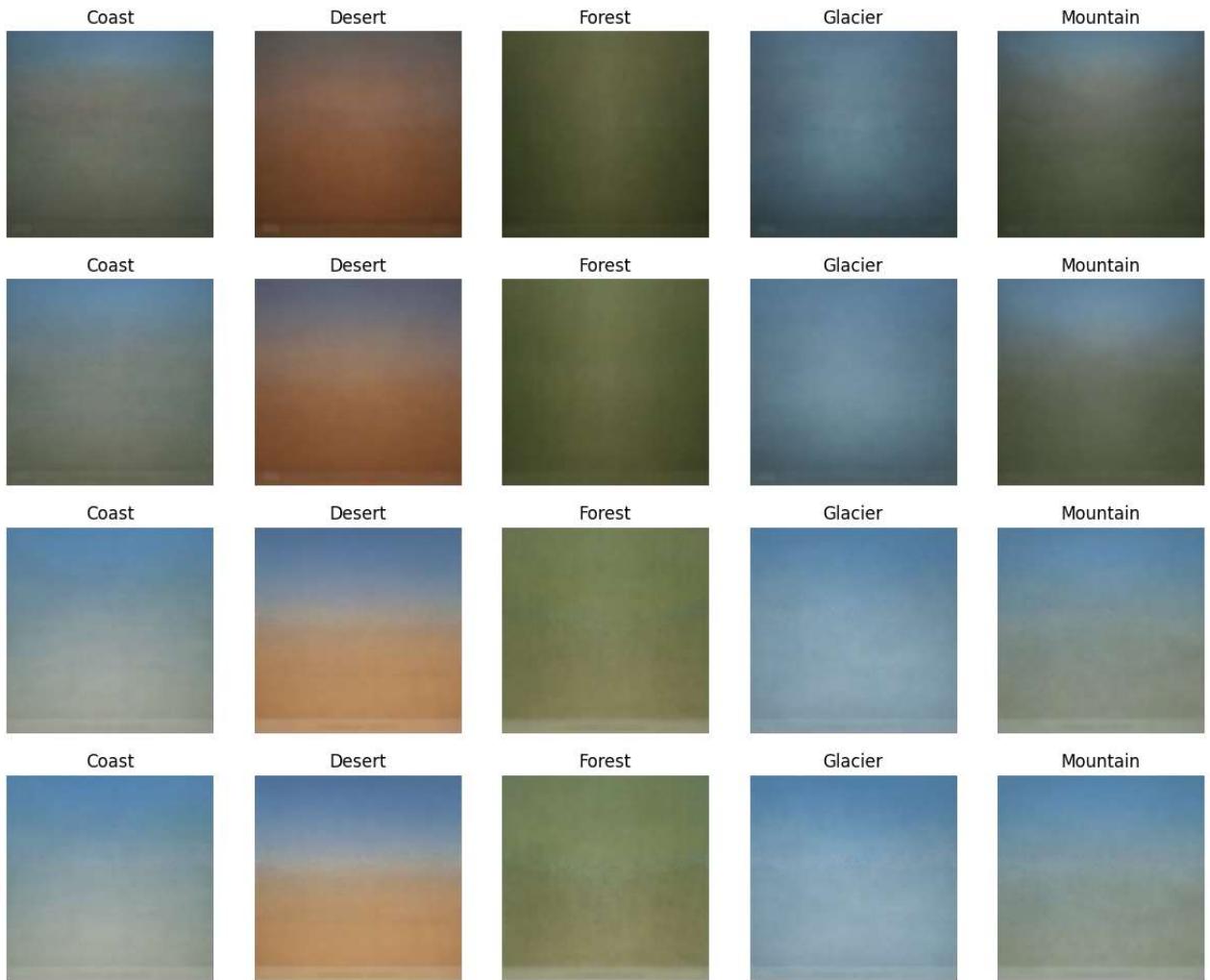
Epoch 59/100

300/300 [=====] - ETA: 0s - loss: 482.4240 - reconstruction_error: 481.3175 - regularization_error: 1.1064

[2023-12-07 11:58:59.922588]: Generating fixed images for epoch 59 ...



[2023-12-07 11:59:00.954831]: Generating random images for epoch 59 ...



300/300 [=====] - 66s 220ms/step - loss: 482.4240 - reconstruction_error: 481.3175 - regularization_error: 1.1064 - val_loss: 495.4491 - val_reconstruction_error: 493.8440 - val_regularization_error: 1.0831

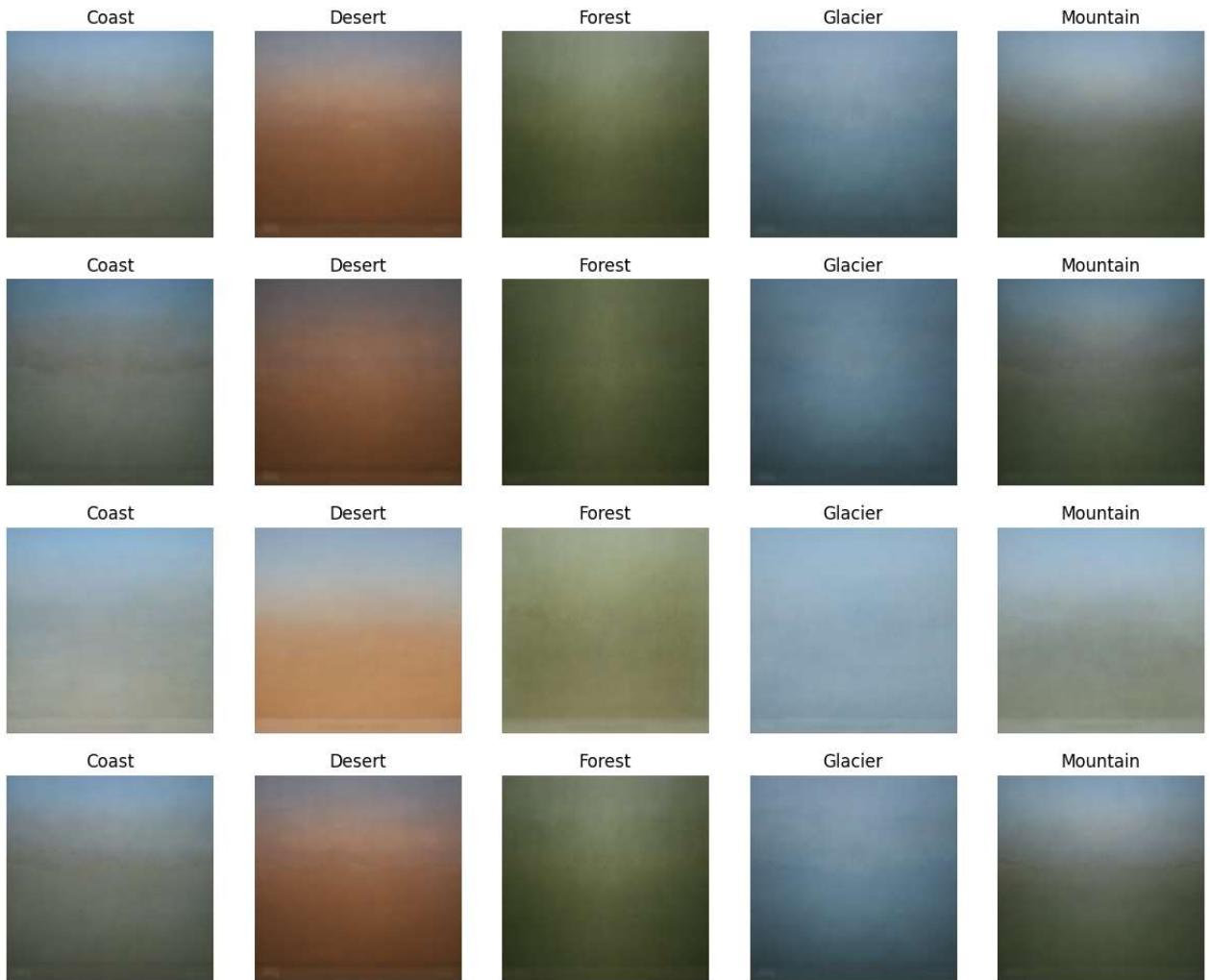
Epoch 60/100

300/300 [=====] - ETA: 0s - loss: 481.5565 - reconstruction_error: 480.4483 - regularization_error: 1.1081

[2023-12-07 12:00:04.810889]: Generating fixed images for epoch 60 ...



[2023-12-07 12:00:05.998230]: Generating random images for epoch 60 ...



300/300 [=====] - 65s 217ms/step - loss: 481.5565 - reconstruction_error: 480.4483 - regularization_error: 1.1081 - val_loss: 492.7094 - val_reconstruction_error: 491.7206 - val_regularization_error: 1.1091

Epoch 61/100

300/300 [=====] - ETA: 0s - loss: 483.3481 - reconstruction_error: 482.2323 - regularization_error: 1.1154

[2023-12-07 12:01:06.572625]: Generating fixed images for epoch 61 ...



[2023-12-07 12:01:07.165323]: Generating random images for epoch 61 ...



300/300 [=====] - 61s 203ms/step - loss: 483.3481 - reconstruction_error: 482.2323 - regularization_error: 1.1154 - val_loss: 495.6645 - val_reconstruction_error: 494.8055 - val_regularization_error: 1.0910

Epoch 62/100

300/300 [=====] - ETA: 0s - loss: 483.0790 - reconstruction_error: 481.9648 - regularization_error: 1.1142

[2023-12-07 12:02:04.629182]: Generating fixed images for epoch 62 ...



[2023-12-07 12:02:05.164946]: Generating random images for epoch 62 ...



300/300 [=====] - 58s 194ms/step - loss: 483.0790 - reconstruction_error: 481.9648 - regularization_error: 1.1142 - val_loss: 492.3895 - val_reconstruction_error: 490.9727 - val_regularization_error: 1.1124

Epoch 63/100

300/300 [=====] - ETA: 0s - loss: 482.8266 - reconstruction_error: 481.7072 - regularization_error: 1.1191

[2023-12-07 12:03:08.303342]: Generating fixed images for epoch 63 ...



[2023-12-07 12:03:08.887597]: Generating random images for epoch 63 ...



300/300 [=====] - 64s 212ms/step - loss: 482.8266 - reconstruction_error: 481.7072 - regularization_error: 1.1191 - val_loss: 493.1411 - val_reconstruction_error: 492.1610 - val_regularization_e
rror: 1.1147

Epoch 64/100

300/300 [=====] - ETA: 0s - loss: 483.0008 - reconstruction_error: 481.8852 - regularization_error: 1.1155

[2023-12-07 12:04:09.362490]: Generating fixed images for epoch 64 ...



[2023-12-07 12:04:09.942507]: Generating random images for epoch 64 ...



300/300 [=====] - 61s 201ms/step - loss: 483.0008 - reconstruction_error: 481.8852 - regularization_error: 1.1155 - val_loss: 493.9049 - val_reconstruction_error: 492.5602 - val_regularization_error: 1.1103

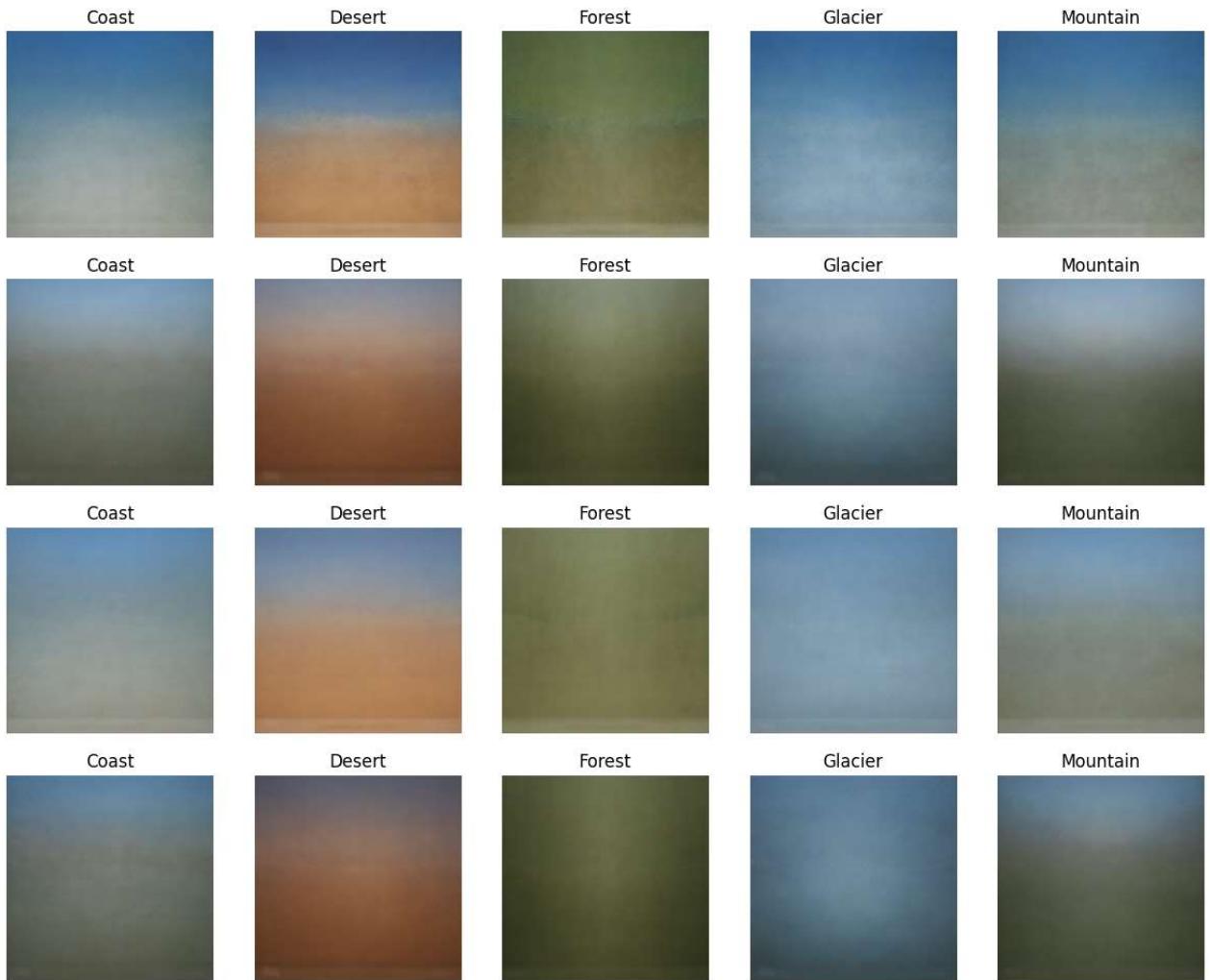
Epoch 65/100

300/300 [=====] - ETA: 0s - loss: 481.8967 - reconstruction_error: 480.7817 - regularization_error: 1.1151

[2023-12-07 12:05:11.473550]: Generating fixed images for epoch 65 ...



[2023-12-07 12:05:11.923019]: Generating random images for epoch 65 ...



300/300 [=====] - 62s 207ms/step - loss: 481.8967 - reconstruction_error: 480.7817 - regularization_error: 1.1151 - val_loss: 492.4993 - val_reconstruction_error: 491.0397 - val_regularization_error: 1.1064

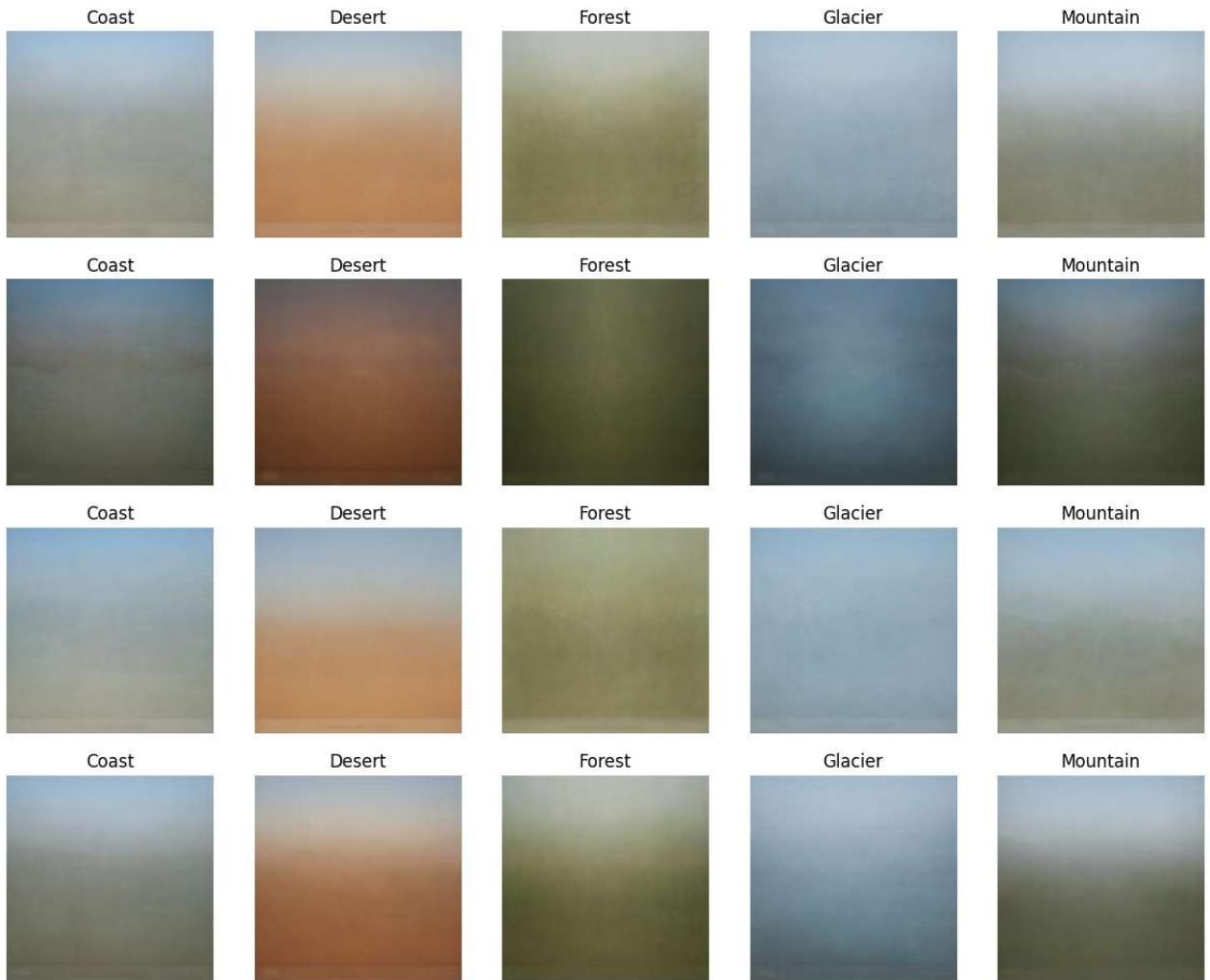
Epoch 66/100

300/300 [=====] - ETA: 0s - loss: 483.2089 - reconstruction_error: 482.1020 - regularization_error: 1.1071

[2023-12-07 12:06:31.499296]: Generating fixed images for epoch 66 ...



[2023-12-07 12:06:31.983714]: Generating random images for epoch 66 ...



300/300 [=====] - 61s 201ms/step - loss: 483.2089 - reconstruction_error: 482.1020 - regularization_error: 1.1071 - val_loss: 494.1263 - val_reconstruction_error: 492.7671 - val_regularization_error: 1.1016

Epoch 67/100

300/300 [=====] - ETA: 0s - loss: 482.9246 - reconstruction_error: 481.8136 - regularization_error: 1.1109

[2023-12-07 12:07:39.591265]: Generating fixed images for epoch 67 ...



[2023-12-07 12:07:40.237379]: Generating random images for epoch 67 ...



300/300 [=====] - 68s 225ms/step - loss: 482.9246 - reconstruction_error: 481.8136 - regularization_error: 1.1109 - val_loss: 490.4907 - val_reconstruction_error: 488.7890 - val_regularization_error: 1.1107

Epoch 68/100

300/300 [=====] - ETA: 0s - loss: 481.3769 - reconstruction_error: 480.2634 - regularization_error: 1.1133

[2023-12-07 12:08:41.297638]: Generating fixed images for epoch 68 ...



[2023-12-07 12:08:41.938572]: Generating random images for epoch 68 ...



300/300 [=====] - 61s 203ms/step - loss: 481.3769 - reconstruction_error: 480.2634 - regularization_error: 1.1133 - val_loss: 492.0172 - val_reconstruction_error: 490.4478 - val_regularization_error: 1.1058

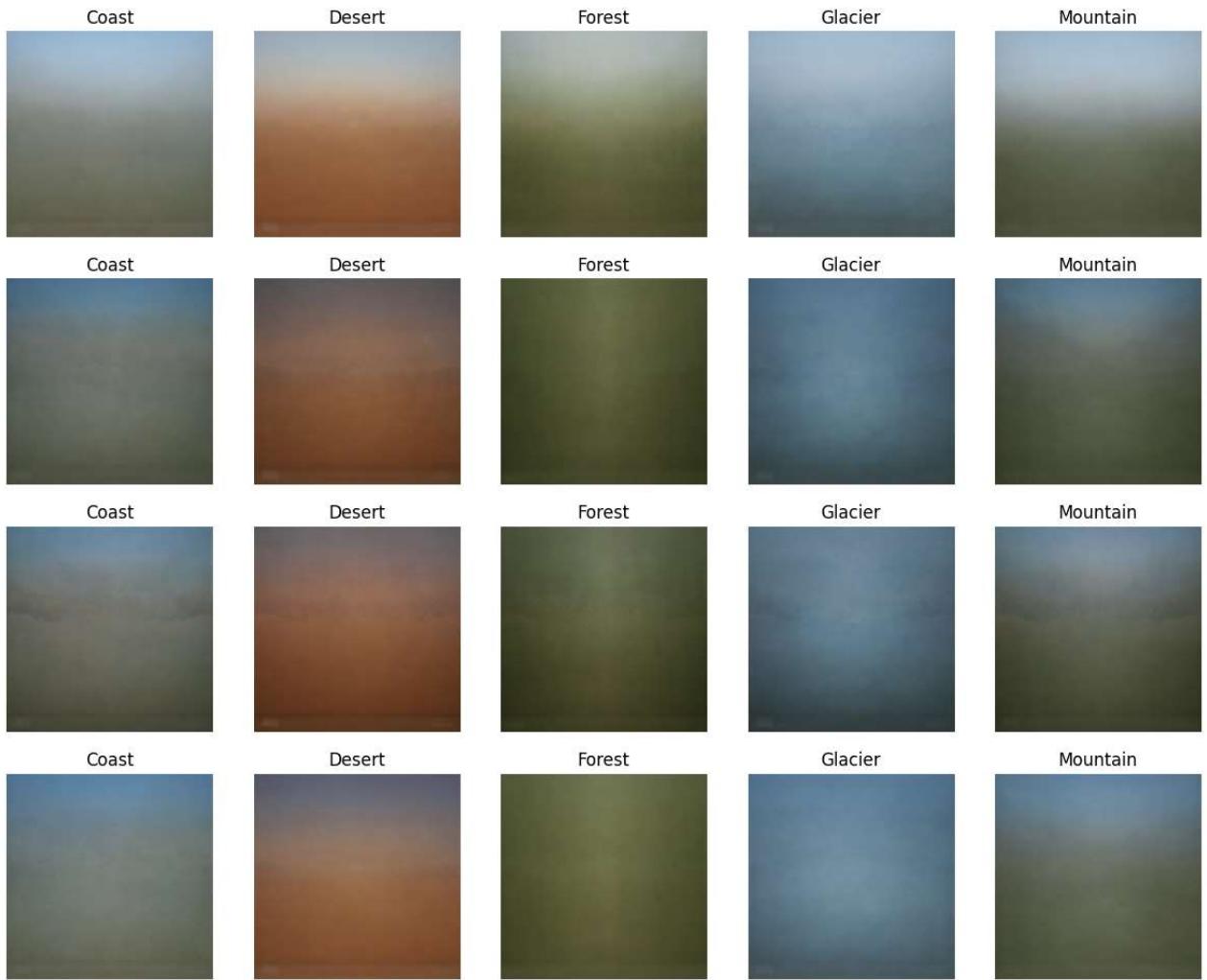
Epoch 69/100

300/300 [=====] - ETA: 0s - loss: 482.2686 - reconstruction_error: 481.1536 - regularization_error: 1.1151

[2023-12-07 12:09:48.236365]: Generating fixed images for epoch 69 ...



[2023-12-07 12:09:48.958091]: Generating random images for epoch 69 ...



300/300 [=====] - 68s 226ms/step - loss: 482.2686 - reconstruction_error: 481.1536 - regularization_error: 1.1151 - val_loss: 495.6255 - val_reconstruction_error: 493.9108 - val_regularization_error: 1.1079

Epoch 70/100

300/300 [=====] - ETA: 0s - loss: 481.8722 - reconstruction_error: 480.7603 - regularization_error: 1.1119

[2023-12-07 12:10:52.808144]: Generating fixed images for epoch 70 ...



[2023-12-07 12:10:53.968341]: Generating random images for epoch 70 ...



300/300 [=====] - 64s 214ms/step - loss: 481.8722 - reconstruction_error: 480.7603 - regularization_error: 1.1119 - val_loss: 487.8449 - val_reconstruction_error: 486.6305 - val_regularization_e
rror: 1.1043

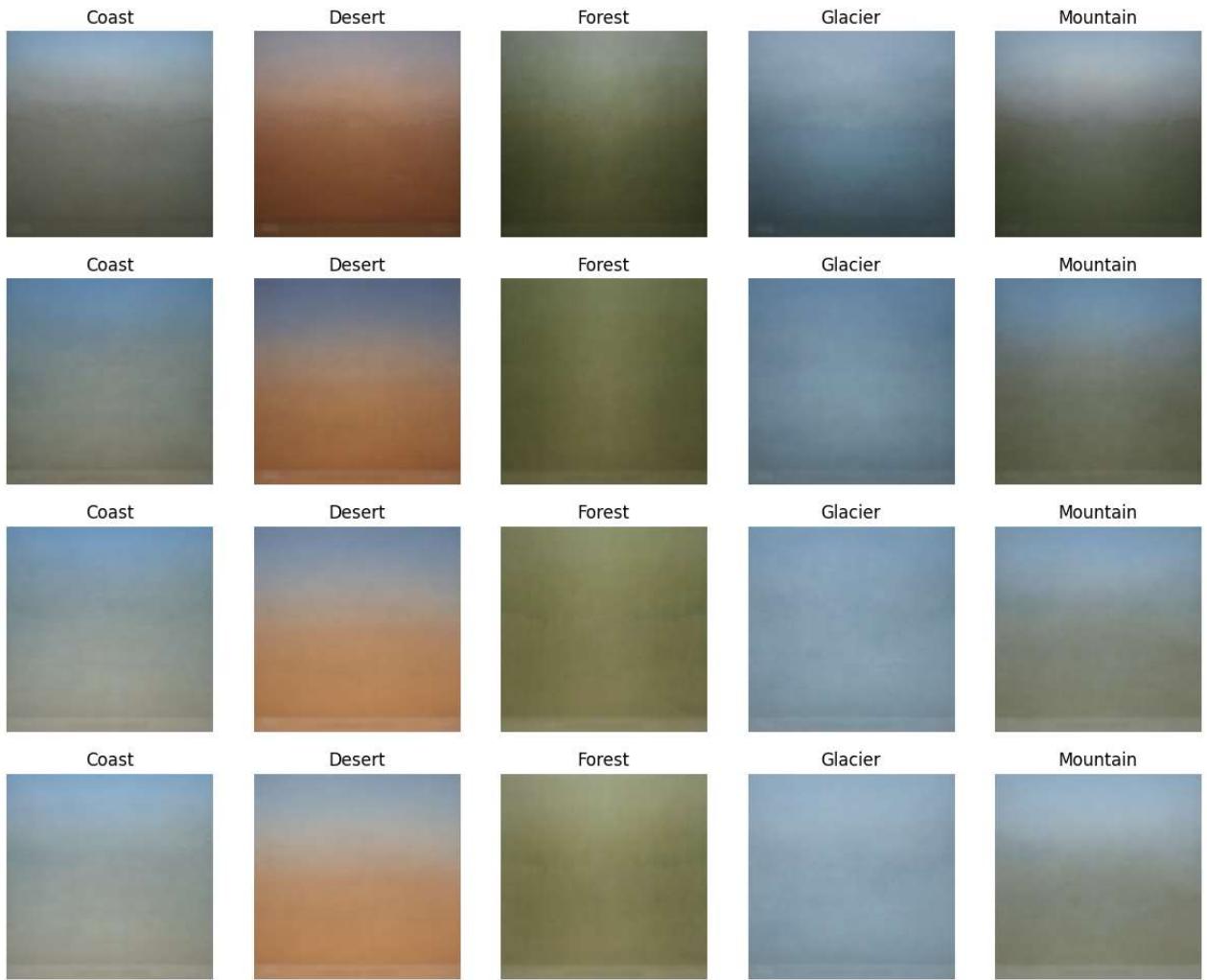
Epoch 71/100

300/300 [=====] - ETA: 0s - loss: 481.8594 - reconstruction_error: 480.7447 - regularization_error: 1.1148

[2023-12-07 12:11:59.007668]: Generating fixed images for epoch 71 ...



[2023-12-07 12:11:59.514628]: Generating random images for epoch 71 ...



300/300 [=====] - 65s 214ms/step - loss: 481.8594 - reconstruction_error: 480.7447 - regularization_error: 1.1148 - val_loss: 493.3822 - val_reconstruction_error: 492.4292 - val_regularization_error: 1.1234

Epoch 72/100

300/300 [=====] - ETA: 0s - loss: 481.6911 - reconstruction_error: 480.5737 - regularization_error: 1.1174

[2023-12-07 12:13:02.242167]: Generating fixed images for epoch 72 ...



[2023-12-07 12:13:02.951725]: Generating random images for epoch 72 ...



300/300 [=====] - 64s 213ms/step - loss: 481.6911 - reconstruction_error: 480.5737 - regularization_error: 1.1174 - val_loss: 493.8179 - val_reconstruction_error: 492.1366 - val_regularization_error: 1.1344

Epoch 73/100

300/300 [=====] - ETA: 0s - loss: 484.0184 - reconstruction_error: 482.8926 - regularization_error: 1.1257

[2023-12-07 12:14:09.519733]: Generating fixed images for epoch 73 ...



[2023-12-07 12:14:09.980088]: Generating random images for epoch 73 ...



300/300 [=====] - 67s 222ms/step - loss: 484.0184 - reconstruction_error: 482.8926 - regularization_error: 1.1257 - val_loss: 493.7093 - val_reconstruction_error: 492.5205 - val_regularization_error: 1.1118

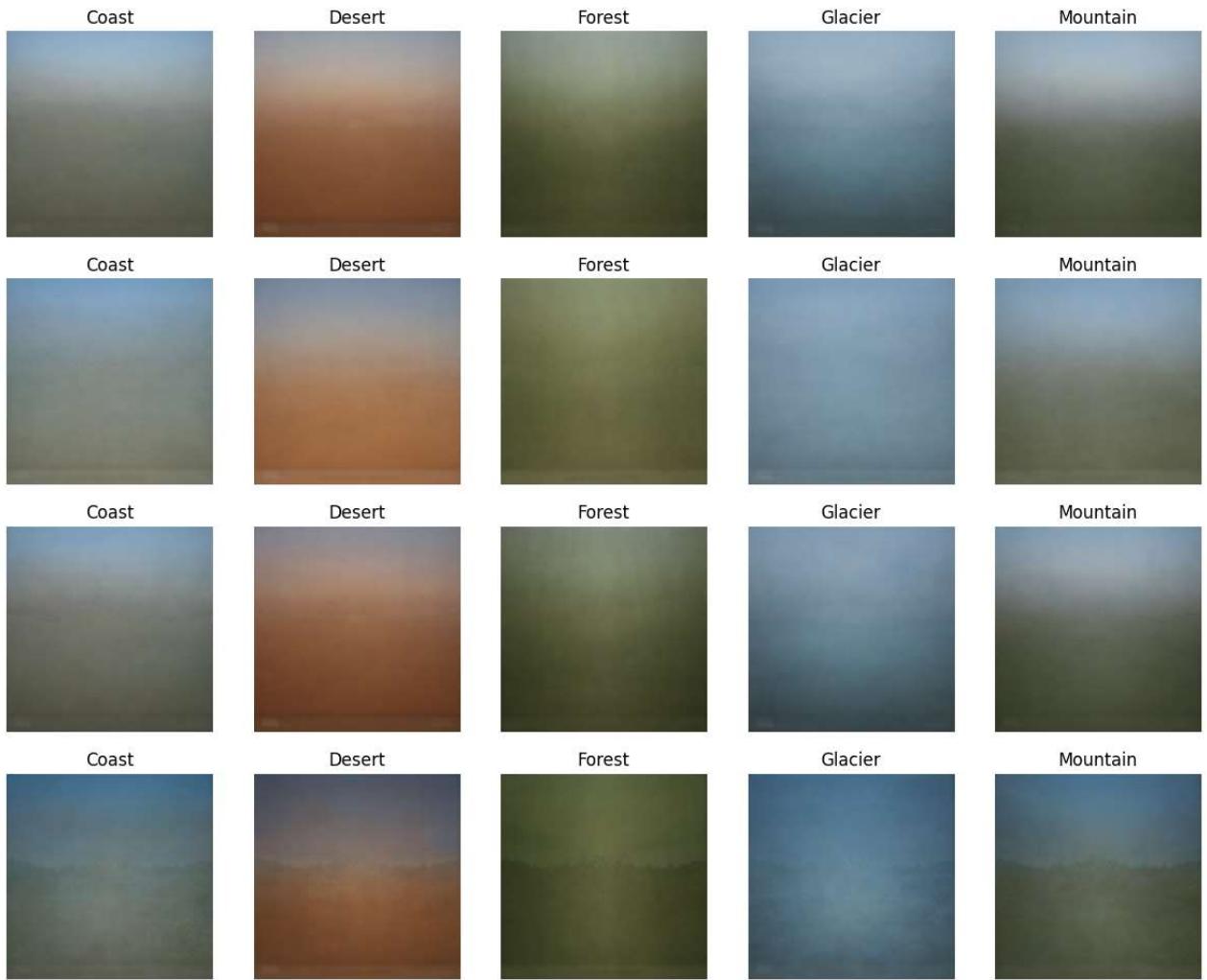
Epoch 74/100

300/300 [=====] - ETA: 0s - loss: 482.2345 - reconstruction_error: 481.1230 - regularization_error: 1.1113

[2023-12-07 12:15:11.245034]: Generating fixed images for epoch 74 ...



[2023-12-07 12:15:11.872030]: Generating random images for epoch 74 ...



300/300 [=====] - 62s 205ms/step - loss: 482.2345 - reconstruction_error: 481.1230 - regularization_error: 1.1113 - val_loss: 492.3267 - val_reconstruction_error: 491.1551 - val_regularization_error: 1.1033

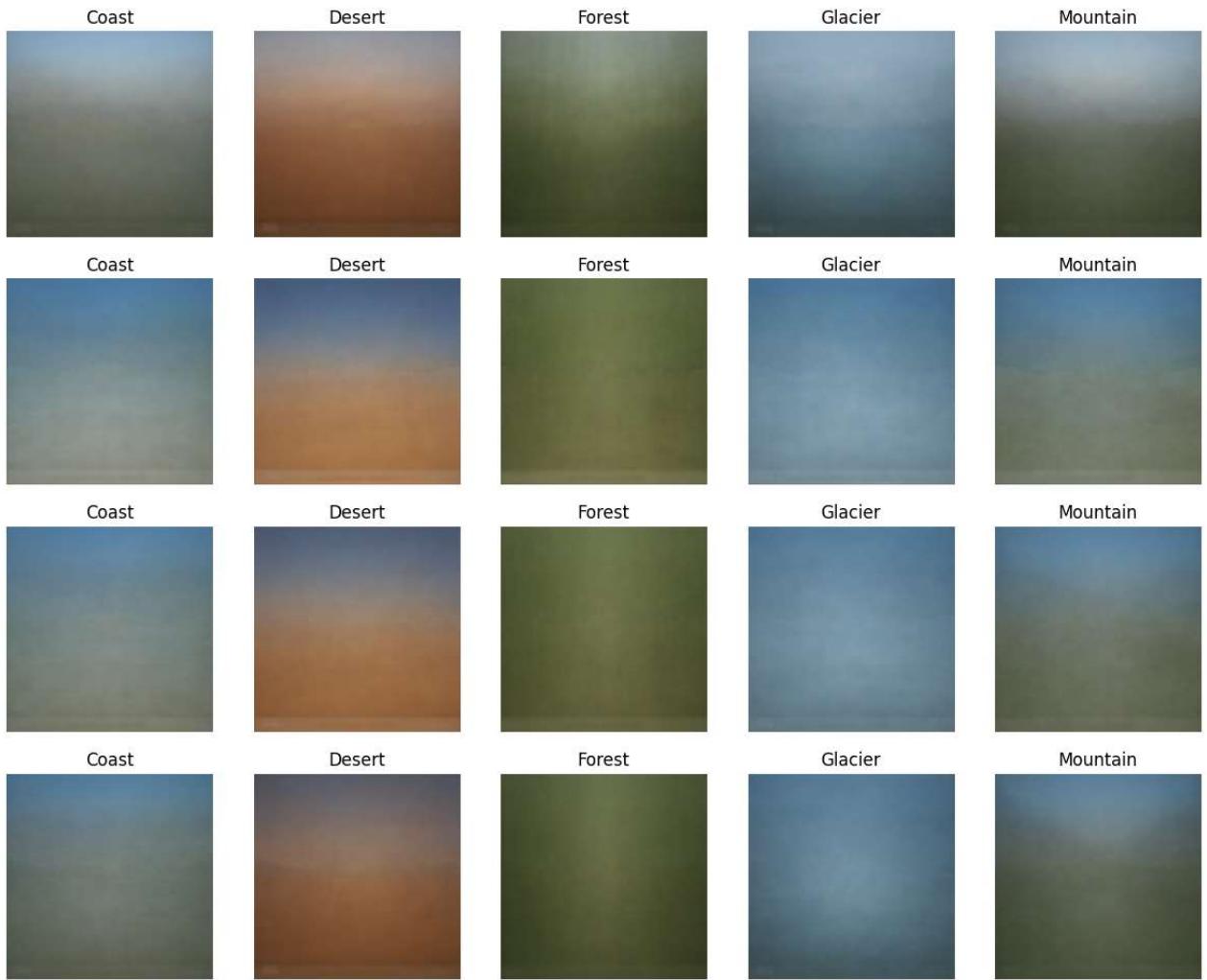
Epoch 75/100

300/300 [=====] - ETA: 0s - loss: 480.3321 - reconstruction_error: 479.2157 - regularization_error: 1.1166

[2023-12-07 12:16:14.665281]: Generating fixed images for epoch 75 ...



[2023-12-07 12:16:15.906037]: Generating random images for epoch 75 ...



300/300 [=====] - 63s 209ms/step - loss: 480.3321 - reconstruction_error: 479.2157 - regularization_error: 1.1166 - val_loss: 487.7162 - val_reconstruction_error: 486.1157 - val_regularization_error: 1.1070

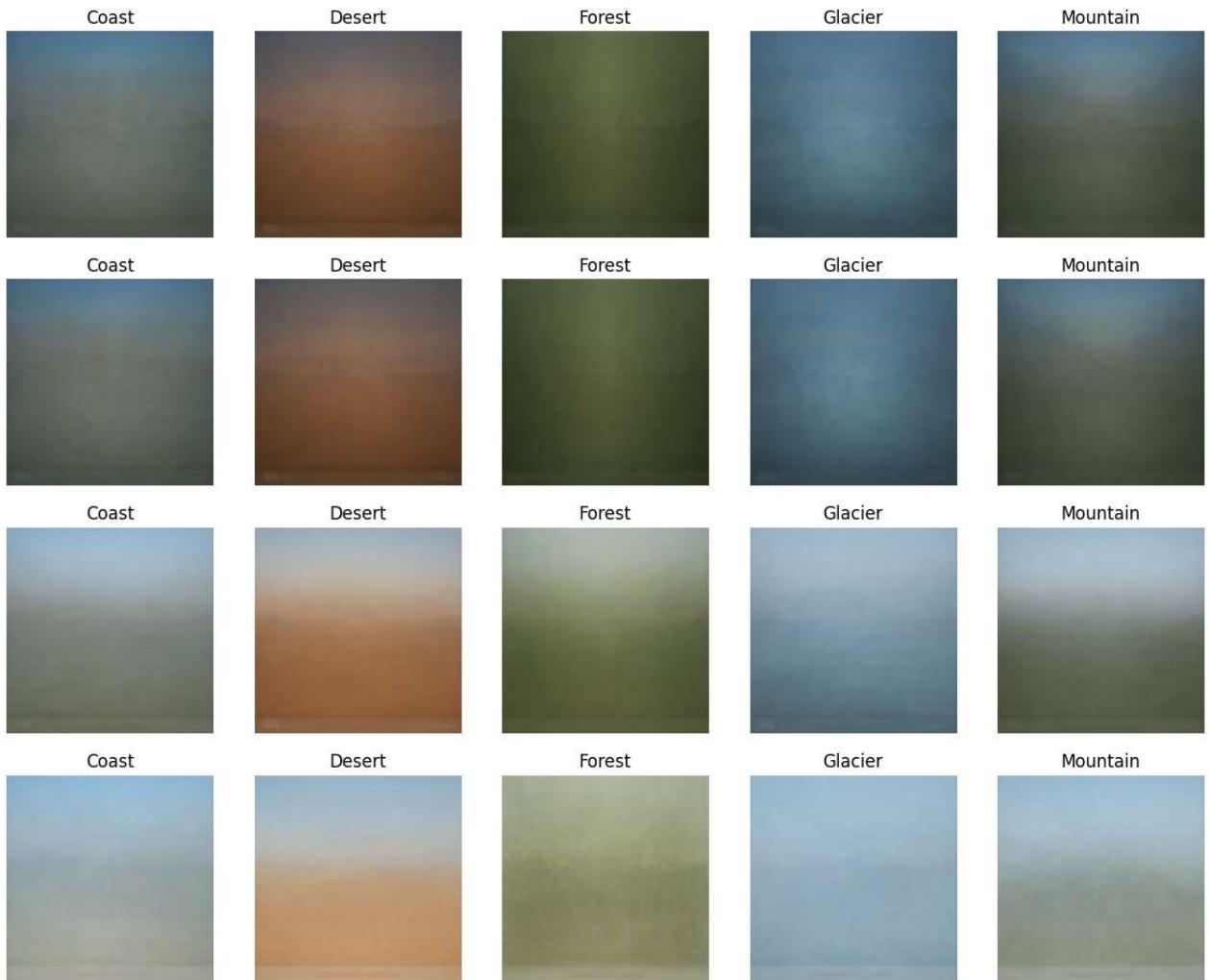
Epoch 76/100

300/300 [=====] - ETA: 0s - loss: 482.6009 - reconstruction_error: 481.4831 - regularization_error: 1.1179

[2023-12-07 12:17:14.940467]: Generating fixed images for epoch 76 ...



[2023-12-07 12:17:15.993609]: Generating random images for epoch 76 ...



300/300 [=====] - 61s 201ms/step - loss: 482.6009 - reconstruction_error: 481.4831 - regularization_error: 1.1179 - val_loss: 495.0458 - val_reconstruction_error: 493.5872 - val_regularization_error: 1.1218

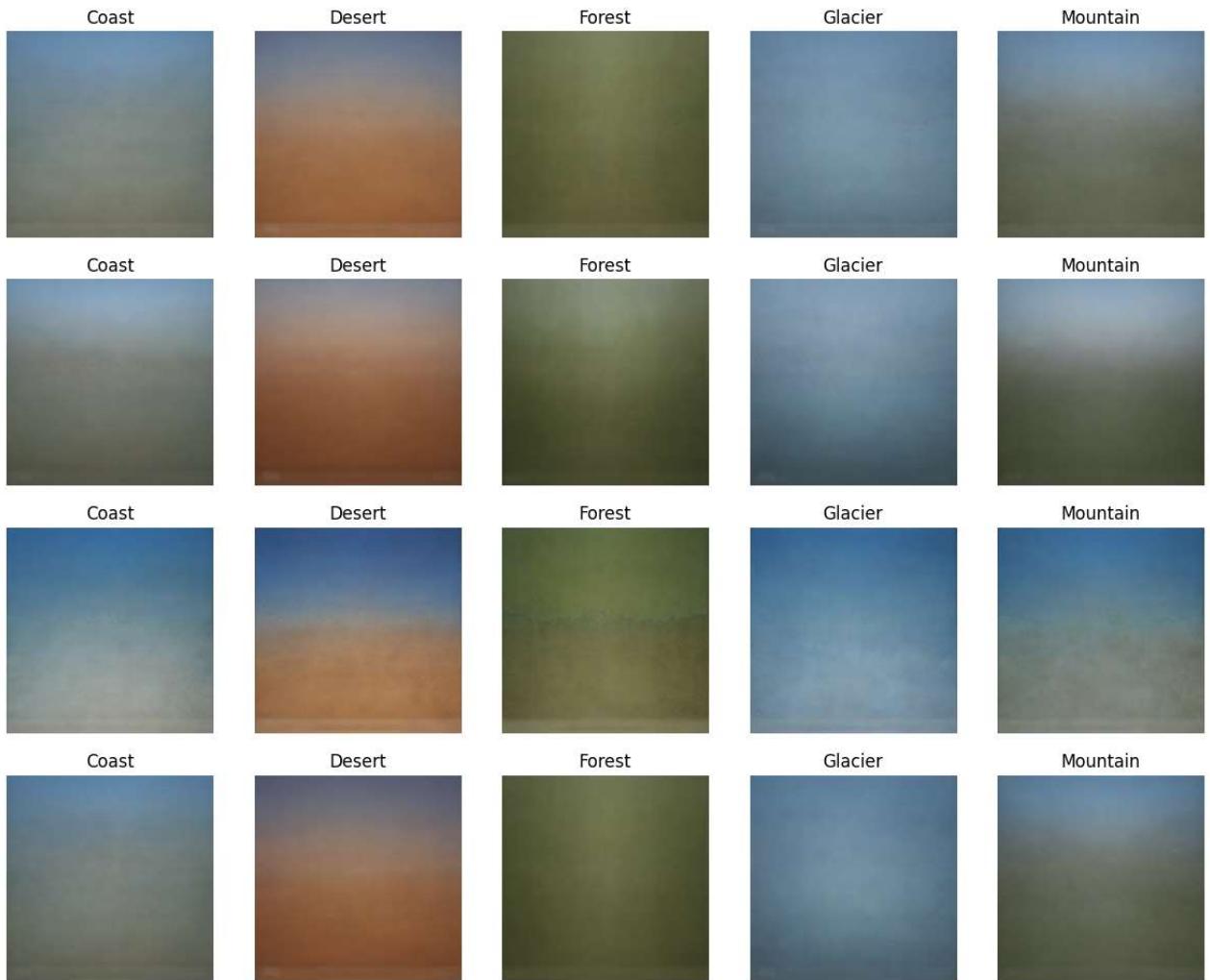
Epoch 77/100

300/300 [=====] - ETA: 0s - loss: 481.3673 - reconstruction_error: 480.2428 - regularization_error: 1.1244

[2023-12-07 12:18:39.811156]: Generating fixed images for epoch 77 ...



[2023-12-07 12:18:40.315230]: Generating random images for epoch 77 ...



300/300 [=====] - 63s 208ms/step - loss: 481.3673 - reconstruction_error: 480.2428 - regularization_error: 1.1244 - val_loss: 495.0504 - val_reconstruction_error: 493.6224 - val_regularization_error: 1.1239

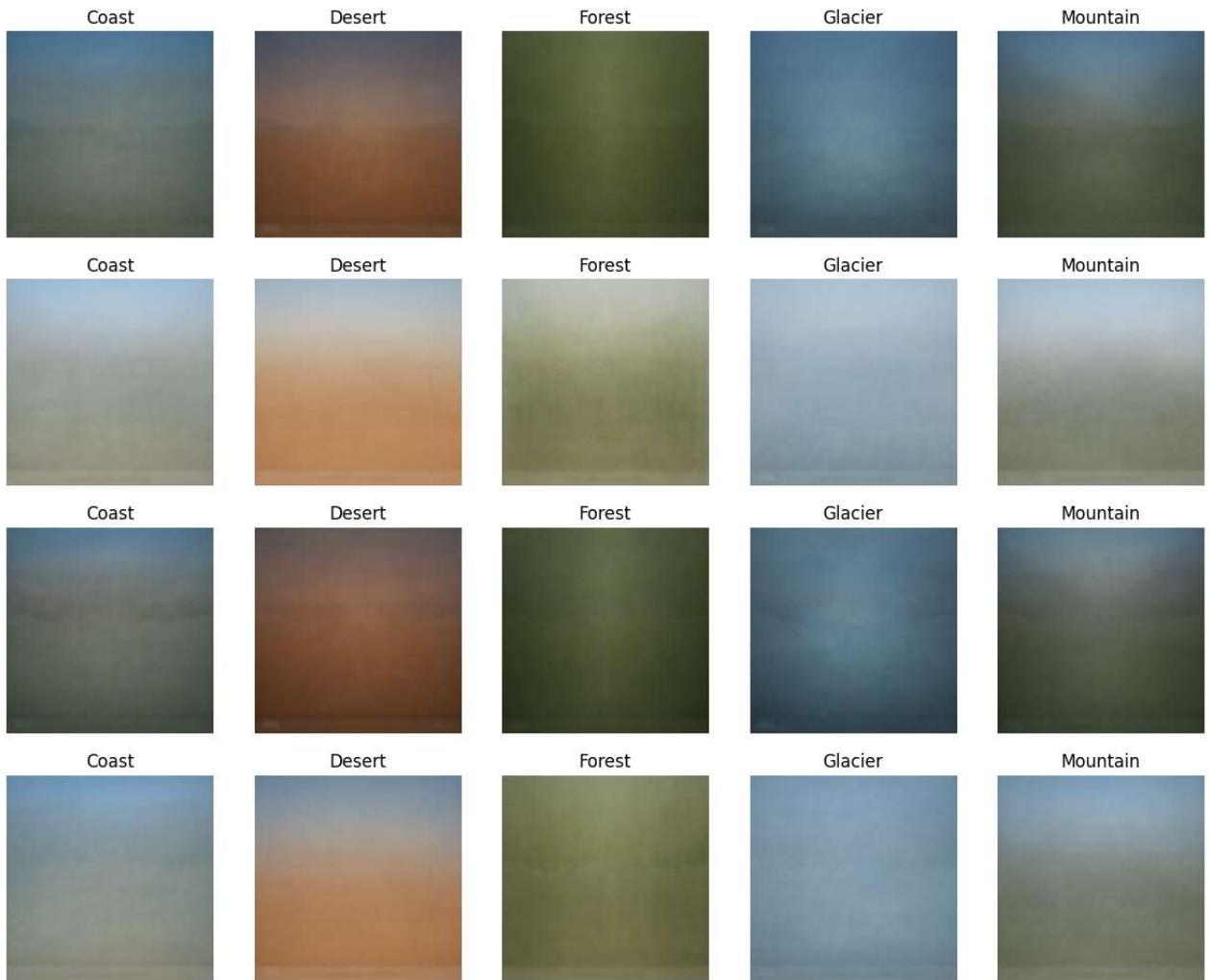
Epoch 78/100

300/300 [=====] - ETA: 0s - loss: 482.5783 - reconstruction_error: 481.4523 - regularization_error: 1.1261

[2023-12-07 12:19:46.019632]: Generating fixed images for epoch 78 ...



[2023-12-07 12:19:46.950785]: Generating random images for epoch 78 ...



300/300 [=====] - 68s 226ms/step - loss: 482.5783 - reconstruction_error: 481.4523 - regularization_error: 1.1261 - val_loss: 489.0931 - val_reconstruction_error: 487.7046 - val_regularization_error: 1.1135

Epoch 79/100

300/300 [=====] - ETA: 0s - loss: 482.8123 - reconstruction_error: 481.6937 - regularization_error: 1.1187

[2023-12-07 12:20:54.934613]: Generating fixed images for epoch 79 ...



[2023-12-07 12:20:55.708074]: Generating random images for epoch 79 ...



300/300 [=====] - 68s 225ms/step - loss: 482.8123 - reconstruction_error: 481.6937 - regularization_error: 1.1187 - val_loss: 491.6139 - val_reconstruction_error: 490.3393 - val_regularization_error: 1.1213

Epoch 80/100

300/300 [=====] - ETA: 0s - loss: 480.7855 - reconstruction_error: 479.6663 - regularization_error: 1.1189

[2023-12-07 12:21:58.568783]: Generating fixed images for epoch 80 ...



[2023-12-07 12:21:59.255017]: Generating random images for epoch 80 ...



300/300 [=====] - 63s 208ms/step - loss: 480.7855 - reconstruction_error: 479.6663 - regularization_error: 1.1189 - val_loss: 488.5655 - val_reconstruction_error: 486.9254 - val_regularization_error: 1.1100
Epoch 81/100
300/300 [=====] - ETA: 0s - loss: 482.1046 - reconstruction_error: 480.9819 - regularization_error: 1.1228

[2023-12-07 12:23:05.379216]: Generating fixed images for epoch 81 ...



[2023-12-07 12:23:05.973436]: Generating random images for epoch 81 ...



300/300 [=====] - 67s 222ms/step - loss: 482.1046 - reconstruction_error: 480.9819 - regularization_error: 1.1228 - val_loss: 486.7774 - val_reconstruction_error: 485.4846 - val_regularization_error: 1.1269

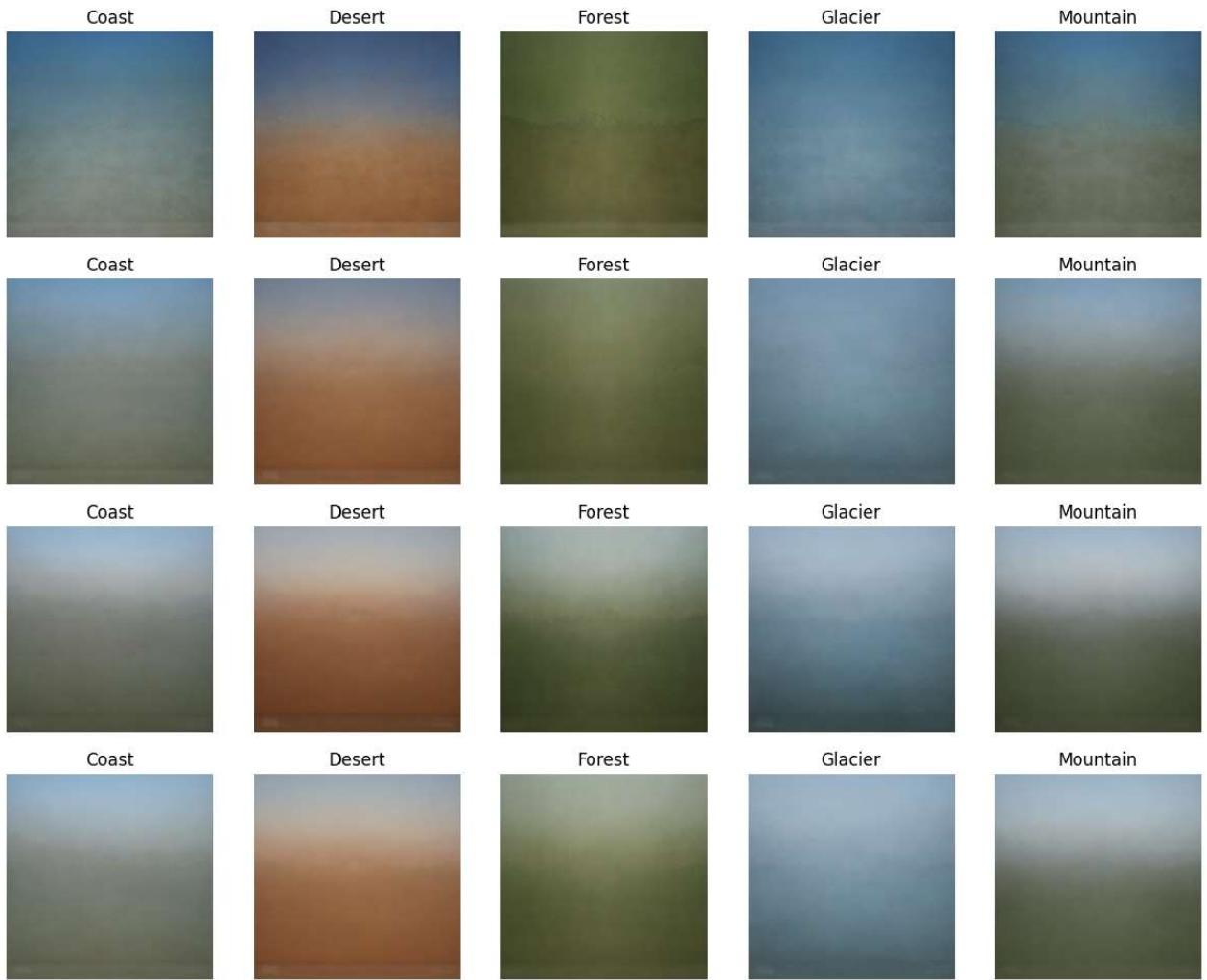
Epoch 82/100

300/300 [=====] - ETA: 0s - loss: 480.7511 - reconstruction_error: 479.6271 - regularization_error: 1.1240

[2023-12-07 12:24:13.101479]: Generating fixed images for epoch 82 ...



[2023-12-07 12:24:14.339368]: Generating random images for epoch 82 ...



300/300 [=====] - 68s 226ms/step - loss: 480.7511 - reconstruction_error: 479.6271 - regularization_error: 1.1240 - val_loss: 488.2937 - val_reconstruction_error: 486.8357 - val_regularization_e
rror: 1.1116

Epoch 83/100

300/300 [=====] - ETA: 0s - loss: 481.2120 - reconstruction_error: 480.0977 - regularization_error: 1.1141

[2023-12-07 12:25:24.496981]: Generating fixed images for epoch 83 ...



[2023-12-07 12:25:25.254531]: Generating random images for epoch 83 ...



300/300 [=====] - 71s 234ms/step - loss: 481.2120 - reconstruction_error: 480.0977 - regularization_error: 1.1141 - val_loss: 492.7973 - val_reconstruction_error: 491.3725 - val_regularization_error: 1.0978

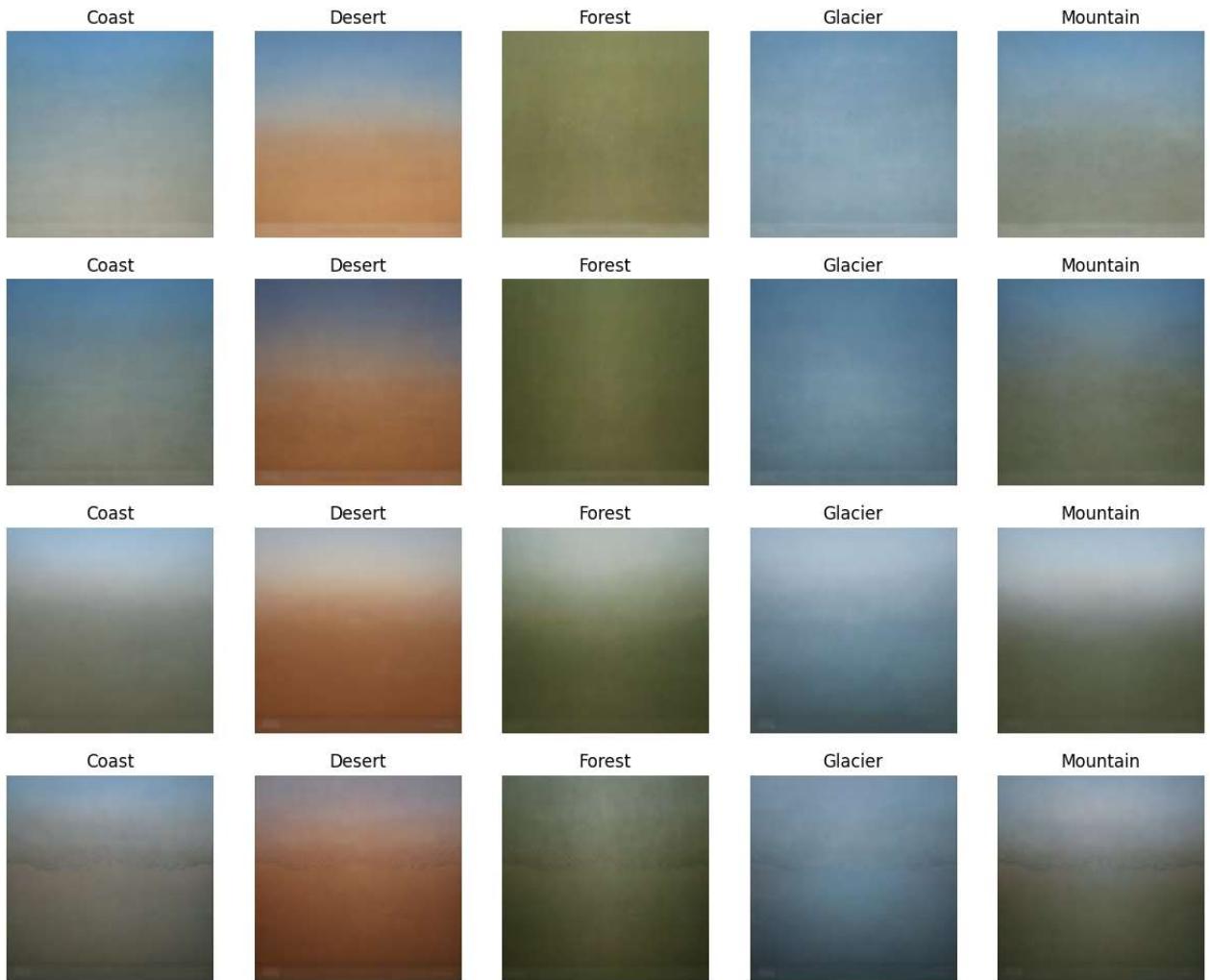
Epoch 84/100

300/300 [=====] - ETA: 0s - loss: 480.0837 - reconstruction_error: 478.9671 - regularization_error: 1.1167

[2023-12-07 12:26:30.375672]: Generating fixed images for epoch 84 ...



[2023-12-07 12:26:30.850047]: Generating random images for epoch 84 ...



300/300 [=====] - 66s 220ms/step - loss: 480.0837 - reconstruction_error: 478.9671 - regularization_error: 1.1167 - val_loss: 491.0708 - val_reconstruction_error: 489.7552 - val_regularization_error: 1.1130

Epoch 85/100

300/300 [=====] - ETA: 0s - loss: 480.5671 - reconstruction_error: 479.4451 - regularization_error: 1.1219

[2023-12-07 12:27:42.066664]: Generating fixed images for epoch 85 ...



[2023-12-07 12:27:42.553650]: Generating random images for epoch 85 ...



300/300 [=====] - 71s 237ms/step - loss: 480.5671 - reconstruction_error: 479.4451 - regularization_error: 1.1219 - val_loss: 490.0941 - val_reconstruction_error: 489.0865 - val_regularization_error: 1.1295

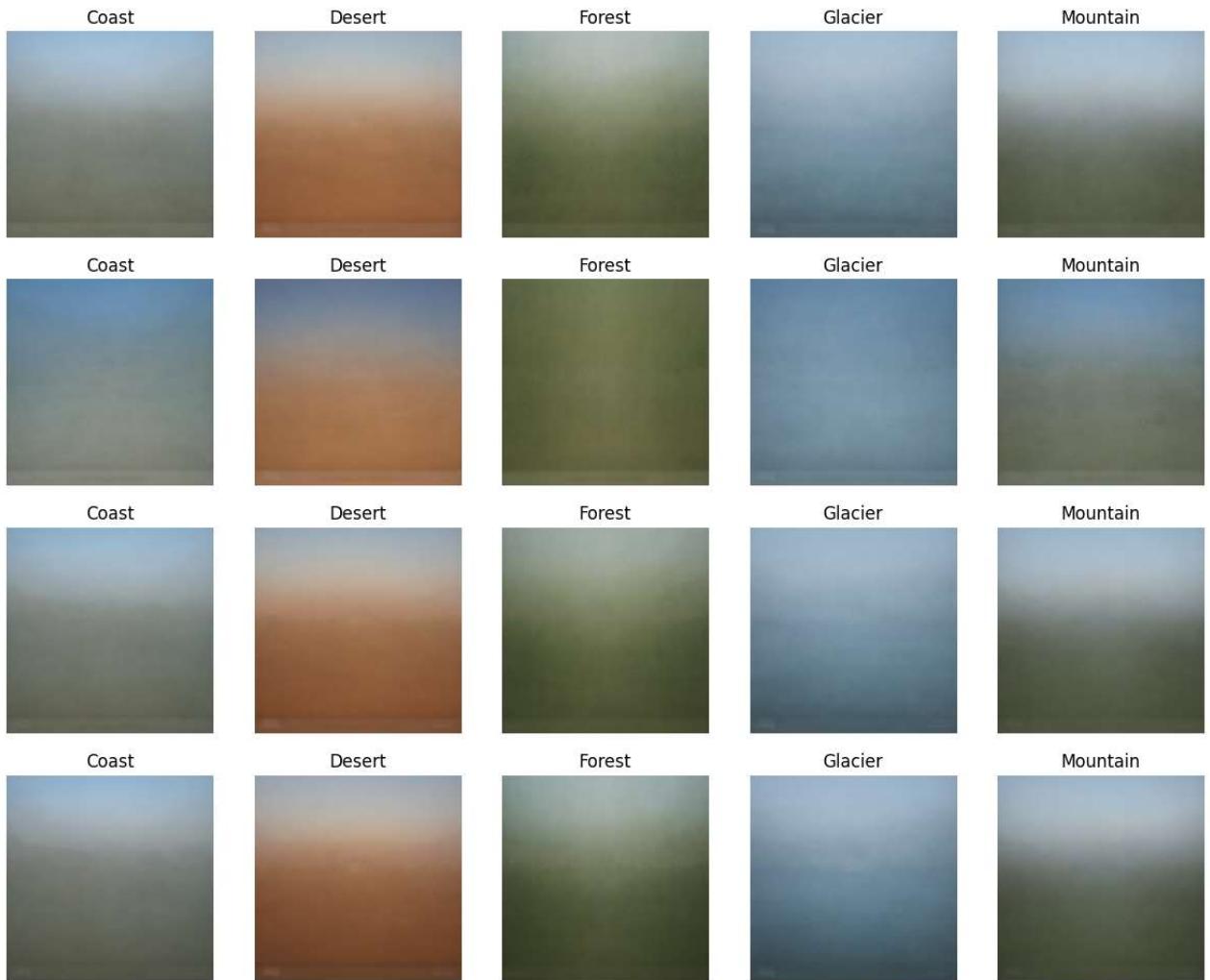
Epoch 86/100

300/300 [=====] - ETA: 0s - loss: 482.3292 - reconstruction_error: 481.2036 - regularization_error: 1.1258

[2023-12-07 12:28:56.495572]: Generating fixed images for epoch 86 ...



[2023-12-07 12:28:56.927896]: Generating random images for epoch 86 ...



300/300 [=====] - 63s 209ms/step - loss: 482.3292 - reconstruction_error: 481.2036 - regularization_error: 1.1258 - val_loss: 489.0758 - val_reconstruction_error: 487.7198 - val_regularization_error: 1.1103

Epoch 87/100

300/300 [=====] - ETA: 0s - loss: 479.0320 - reconstruction_error: 477.9114 - regularization_error: 1.1210

[2023-12-07 12:30:00.219791]: Generating fixed images for epoch 87 ...



[2023-12-07 12:30:00.652615]: Generating random images for epoch 87 ...



300/300 [=====] - 64s 212ms/step - loss: 479.0320 - reconstruction_error: 477.9114 - regularization_error: 1.1210 - val_loss: 487.8448 - val_reconstruction_error: 487.2689 - val_regularization_error: 1.1113

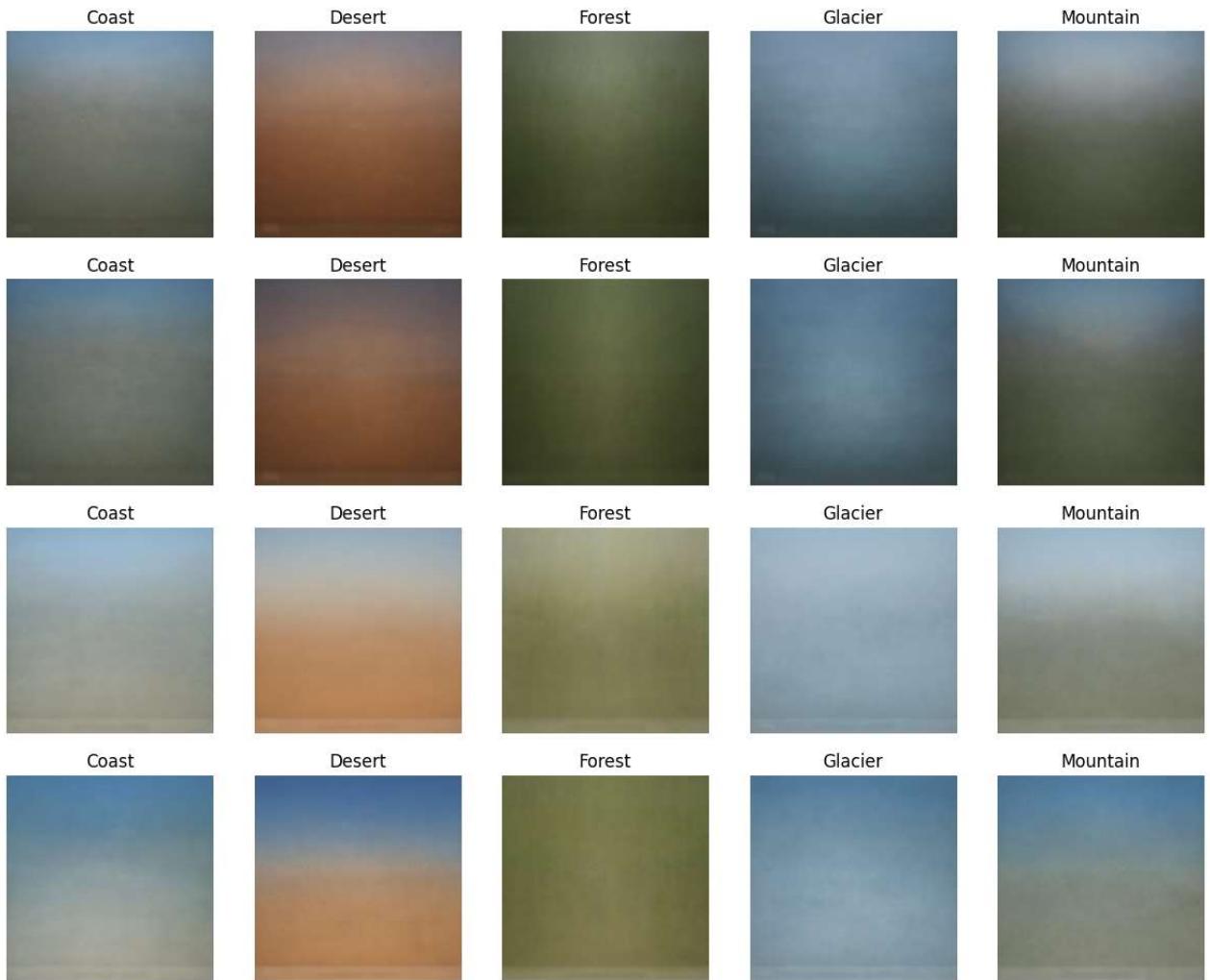
Epoch 88/100

300/300 [=====] - ETA: 0s - loss: 480.5324 - reconstruction_error: 479.4157 - regularization_error: 1.1166

[2023-12-07 12:31:01.318834]: Generating fixed images for epoch 88 ...



[2023-12-07 12:31:01.938969]: Generating random images for epoch 88 ...

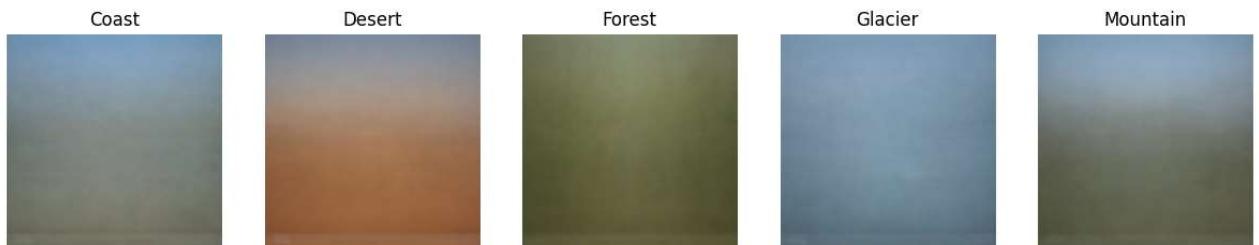


300/300 [=====] - 61s 202ms/step - loss: 480.5324 - reconstruction_error: 479.4157 - regularization_error: 1.1166 - val_loss: 494.1768 - val_reconstruction_error: 492.6281 - val_regularization_error: 1.1093

Epoch 89/100

300/300 [=====] - ETA: 0s - loss: 481.9359 - reconstruction_error: 480.8120 - regularization_error: 1.1236

[2023-12-07 12:32:28.918998]: Generating fixed images for epoch 89 ...



[2023-12-07 12:32:29.876394]: Generating random images for epoch 89 ...



300/300 [=====] - 68s 223ms/step - loss: 481.9359 - reconstruction_error: 480.8120 - regularization_error: 1.1236 - val_loss: 493.0529 - val_reconstruction_error: 491.4502 - val_regularization_e
rror: 1.1189

Epoch 90/100

300/300 [=====] - ETA: 0s - loss: 479.5386 - reconstruction_error: 478.4193 - regularization_error: 1.1194

[2023-12-07 12:33:30.623170]: Generating fixed images for epoch 90 ...



[2023-12-07 12:33:31.914134]: Generating random images for epoch 90 ...



300/300 [=====] - 62s 204ms/step - loss: 479.5386 - reconstruction_error: 478.4193 - regularization_error: 1.1194 - val_loss: 492.2807 - val_reconstruction_error: 491.4913 - val_regularization_error: 1.1127

Epoch 91/100

300/300 [=====] - ETA: 0s - loss: 479.7289 - reconstruction_error: 478.6104 - regularization_error: 1.1184

[2023-12-07 12:34:32.885906]: Generating fixed images for epoch 91 ...



[2023-12-07 12:34:33.359554]: Generating random images for epoch 91 ...



300/300 [=====] - 61s 202ms/step - loss: 479.7289 - reconstruction_error: 478.6104 - regularization_error: 1.1184 - val_loss: 490.0341 - val_reconstruction_error: 488.9494 - val_regularization_error: 1.1187

Epoch 92/100

300/300 [=====] - ETA: 0s - loss: 480.5675 - reconstruction_error: 479.4456 - regularization_error: 1.1219

[2023-12-07 12:35:30.969957]: Generating fixed images for epoch 92 ...



[2023-12-07 12:35:31.889535]: Generating random images for epoch 92 ...



300/300 [=====] - 59s 196ms/step - loss: 480.5675 - reconstruction_error: 479.4456 - regularization_error: 1.1219 - val_loss: 490.5221 - val_reconstruction_error: 488.8998 - val_regularization_error: 1.1124

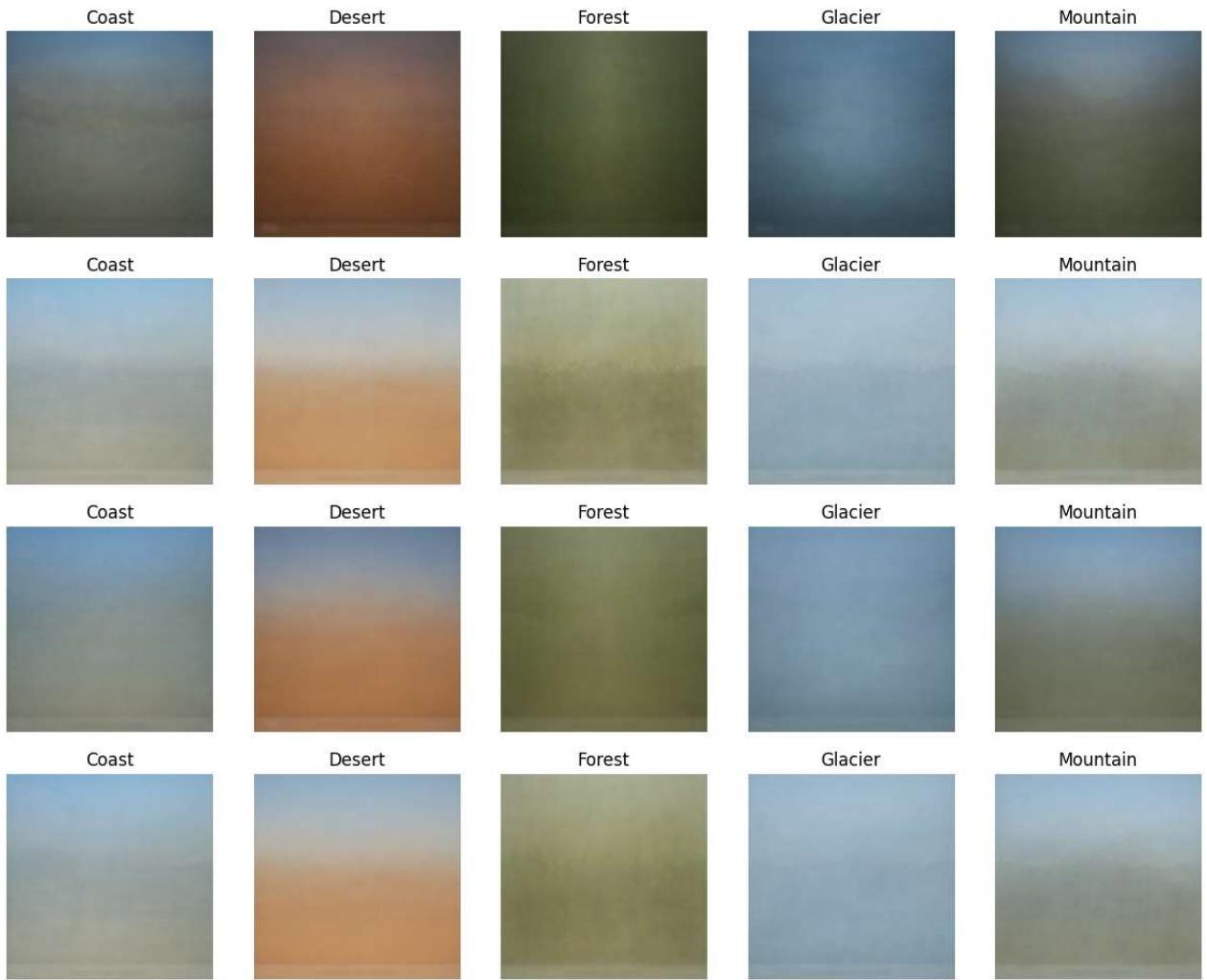
Epoch 93/100

300/300 [=====] - ETA: 0s - loss: 481.2455 - reconstruction_error: 480.1240 - regularization_error: 1.1216

[2023-12-07 12:36:53.588564]: Generating fixed images for epoch 93 ...



[2023-12-07 12:36:54.036867]: Generating random images for epoch 93 ...

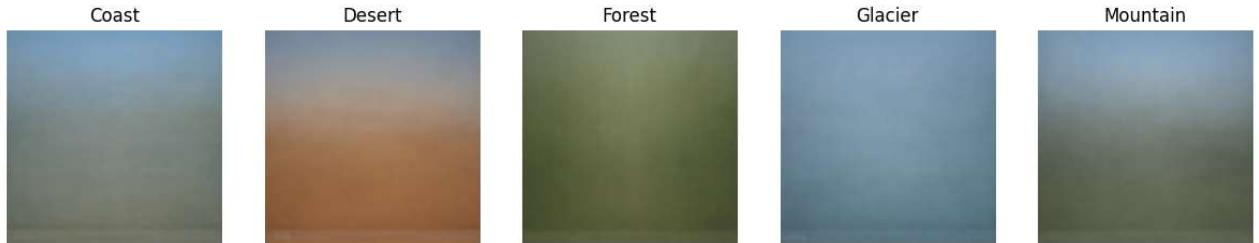


300/300 [=====] - 59s 194ms/step - loss: 481.2455 - reconstruction_error: 480.1240 - regularization_error: 1.1216 - val_loss: 487.5461 - val_reconstruction_error: 485.9740 - val_regularization_error: 1.1176

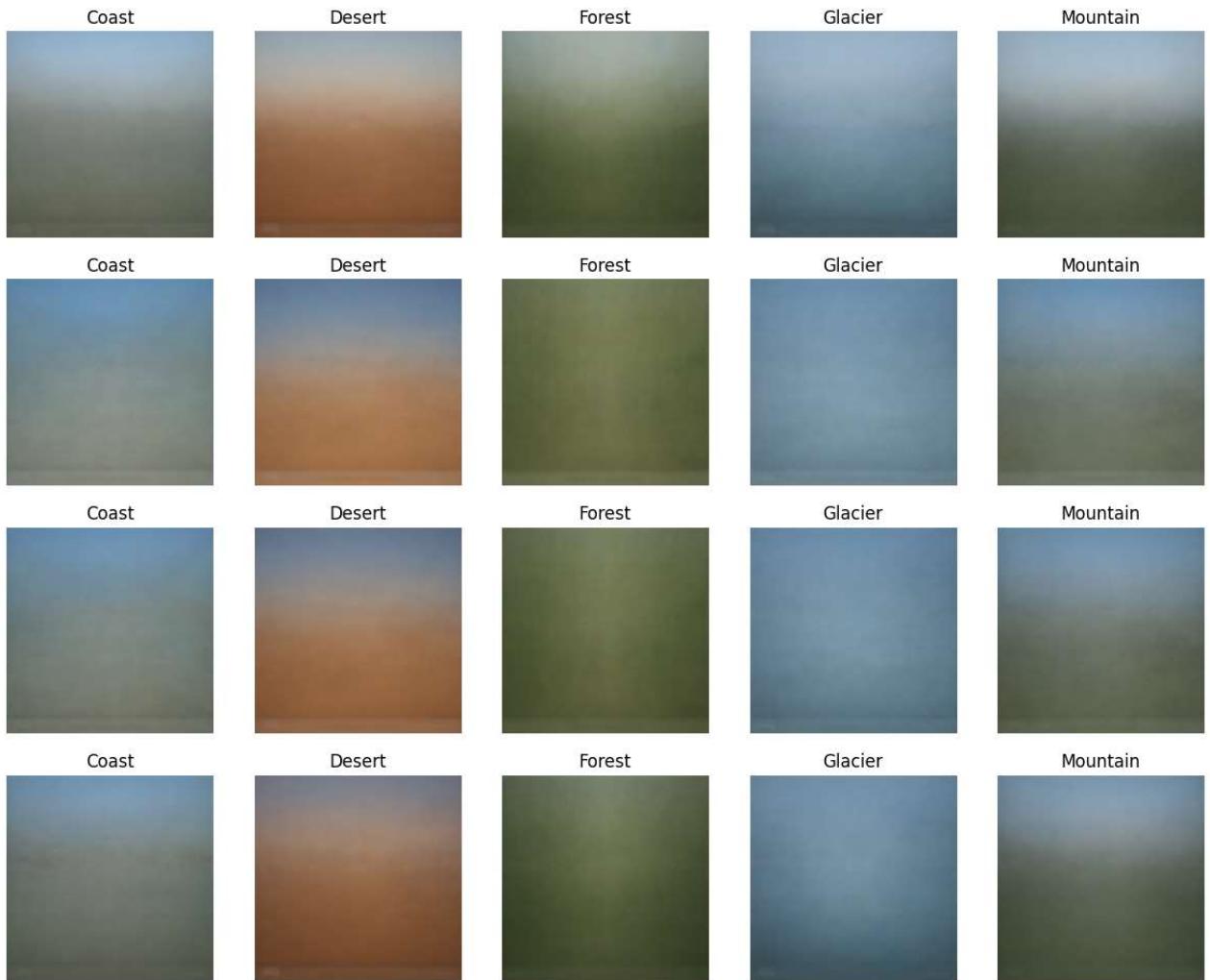
Epoch 94/100

300/300 [=====] - ETA: 0s - loss: 481.5095 - reconstruction_error: 480.3867 - regularization_error: 1.1231

[2023-12-07 12:37:57.936721]: Generating fixed images for epoch 94 ...



[2023-12-07 12:37:58.453072]: Generating random images for epoch 94 ...



300/300 [=====] - 65s 214ms/step - loss: 481.5095 - reconstruction_error: 480.3867 - regularization_error: 1.1231 - val_loss: 488.3577 - val_reconstruction_error: 486.8088 - val_regularization_error: 1.1229

Epoch 95/100

300/300 [=====] - ETA: 0s - loss: 479.3568 - reconstruction_error: 478.2368 - regularization_error: 1.1199

[2023-12-07 12:39:05.870894]: Generating fixed images for epoch 95 ...



[2023-12-07 12:39:06.625044]: Generating random images for epoch 95 ...



300/300 [=====] - 68s 226ms/step - loss: 479.3568 - reconstruction_error: 478.2368 - regularization_error: 1.1199 - val_loss: 488.8753 - val_reconstruction_error: 487.3869 - val_regularization_error: 1.1183

Epoch 96/100

300/300 [=====] - ETA: 0s - loss: 479.8173 - reconstruction_error: 478.6930 - regularization_error: 1.1241

[2023-12-07 12:40:07.622287]: Generating fixed images for epoch 96 ...



[2023-12-07 12:40:08.084798]: Generating random images for epoch 96 ...



300/300 [=====] - 61s 203ms/step - loss: 479.8173 - reconstruction_error: 478.6930 - regularization_error: 1.1241 - val_loss: 491.6492 - val_reconstruction_error: 490.2316 - val_regularization_error: 1.1189

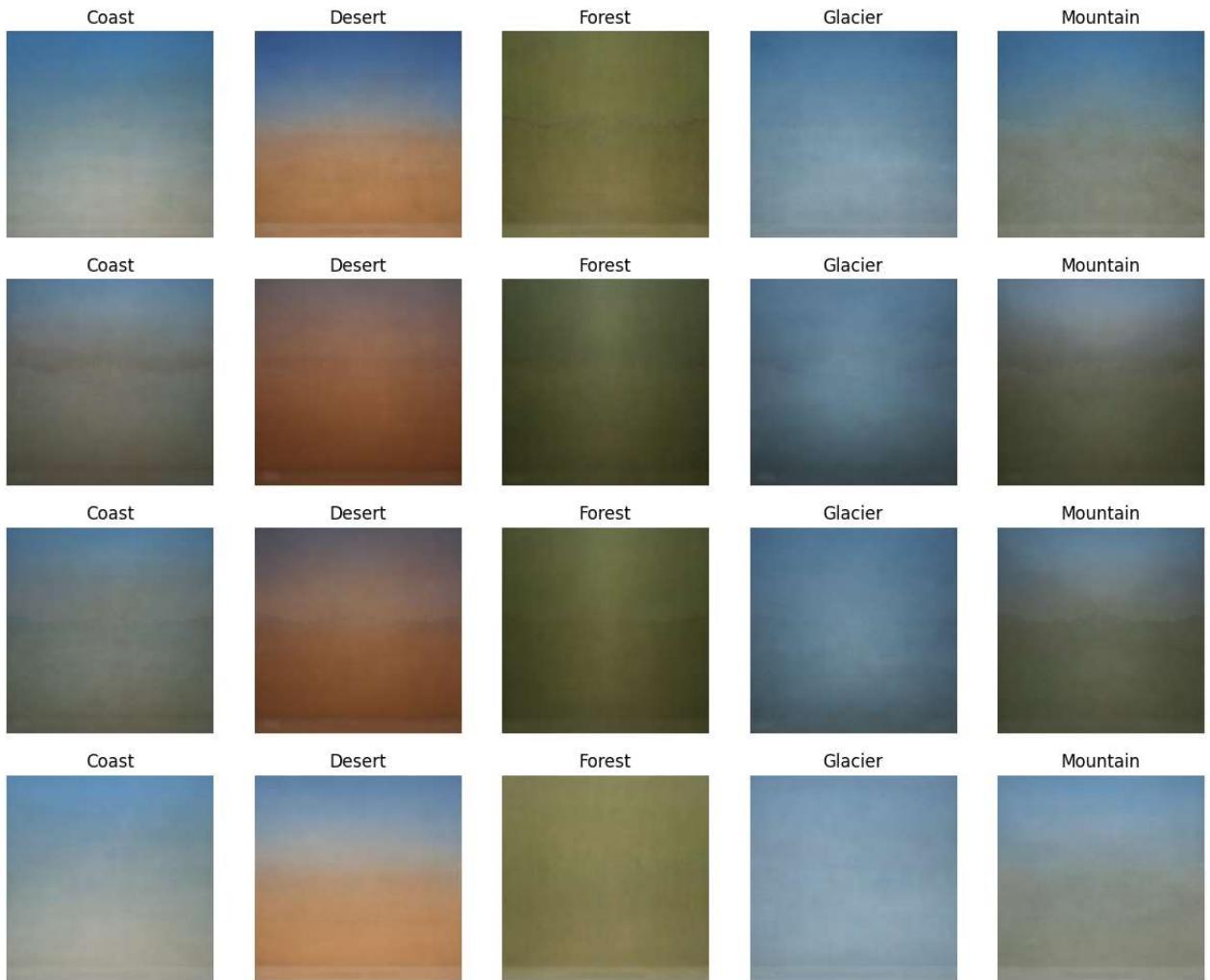
Epoch 97/100

300/300 [=====] - ETA: 0s - loss: 480.4817 - reconstruction_error: 479.3552 - regularization_error: 1.1264

[2023-12-07 12:41:13.675791]: Generating fixed images for epoch 97 ...



[2023-12-07 12:41:14.210970]: Generating random images for epoch 97 ...



300/300 [=====] - 67s 222ms/step - loss: 480.4817 - reconstruction_error: 479.3552 - regularization_error: 1.1264 - val_loss: 491.1708 - val_reconstruction_error: 489.5196 - val_regularization_error: 1.1086

Epoch 98/100

300/300 [=====] - ETA: 0s - loss: 479.7762 - reconstruction_error: 478.6553 - regularization_error: 1.1208

[2023-12-07 12:42:11.384764]: Generating fixed images for epoch 98 ...



[2023-12-07 12:42:11.840139]: Generating random images for epoch 98 ...



300/300 [=====] - 58s 192ms/step - loss: 479.7762 - reconstruction_error: 478.6553 - regularization_error: 1.1208 - val_loss: 490.8440 - val_reconstruction_error: 489.4465 - val_regularization_e

rror: 1.1135

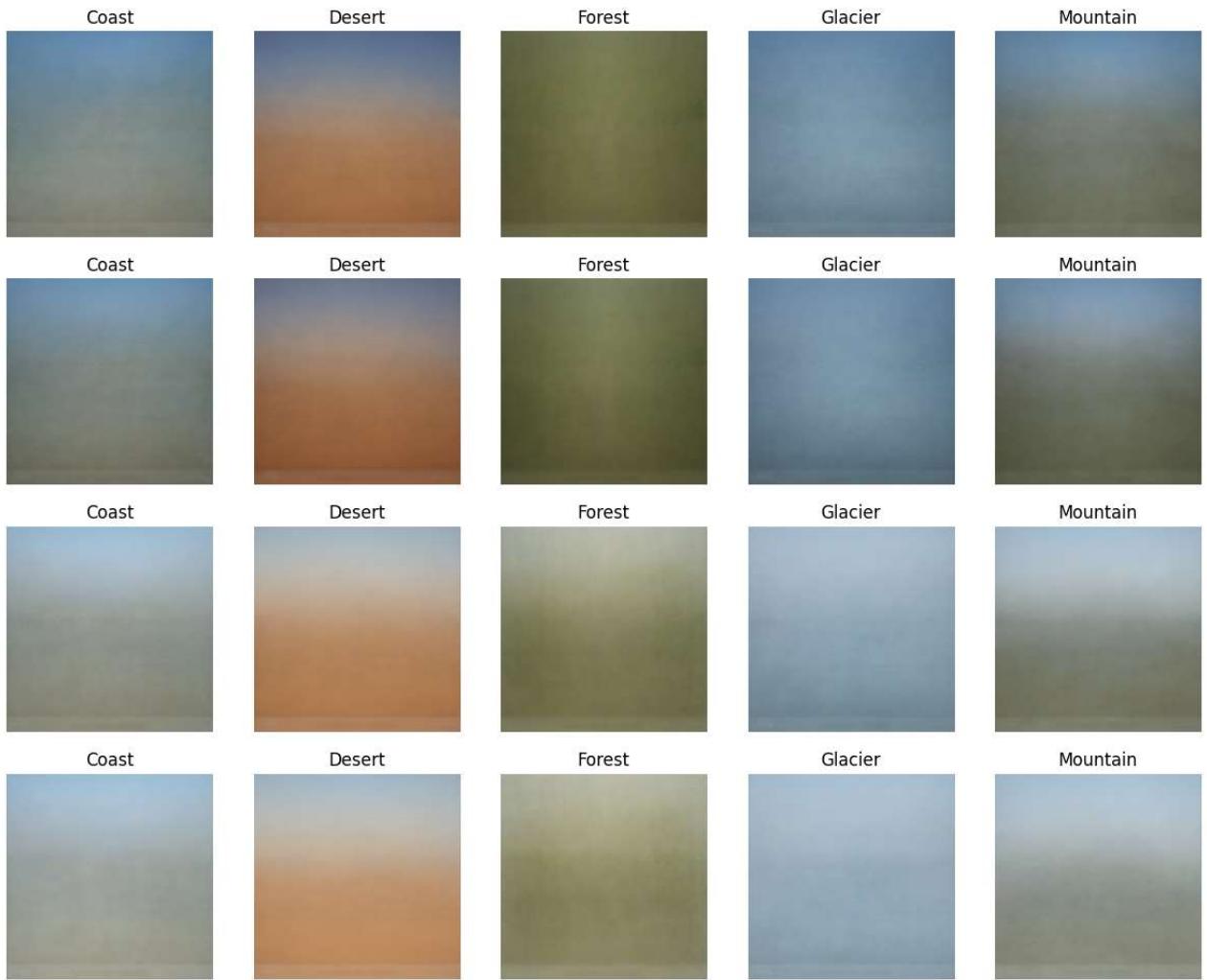
Epoch 99/100

300/300 [=====] - ETA: 0s - loss: 479.4071 - reconstruction_error: 478.2854 - regularization_error: 1.1216

[2023-12-07 12:43:12.569660]: Generating fixed images for epoch 99 ...



[2023-12-07 12:43:13.210201]: Generating random images for epoch 99 ...



300/300 [=====] - 61s 202ms/step - loss: 479.4071 - reconstruction_error: 478.2854 - regularization_error: 1.1216 - val_loss: 485.2687 - val_reconstruction_error: 483.9355 - val_regularization_error: 1.1137

Epoch 100/100

300/300 [=====] - ETA: 0s - loss: 480.9980 - reconstruction_error: 479.8768 - regularization_error: 1.1213

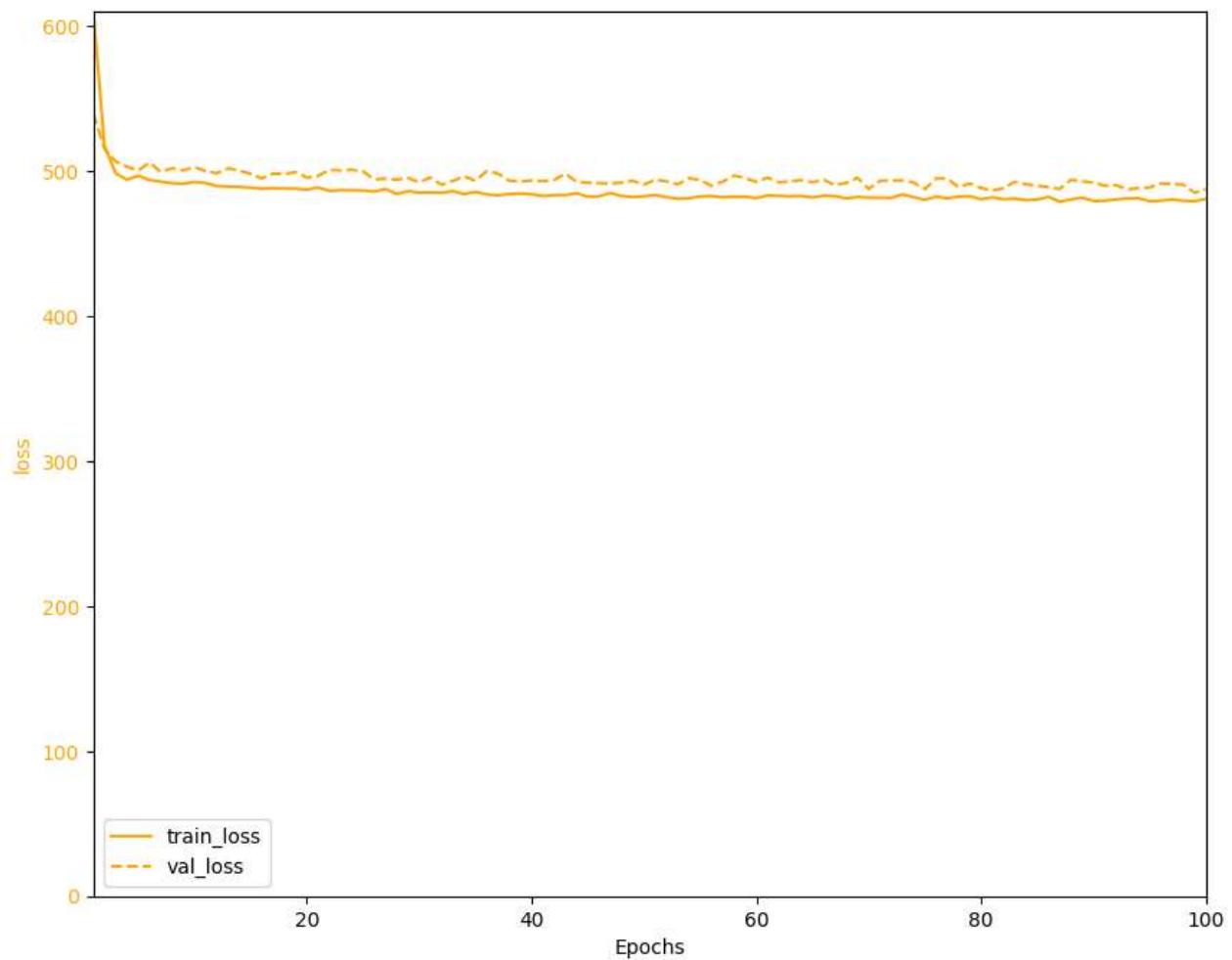
[2023-12-07 12:44:13.203488]: Generating fixed images for epoch 100 ...



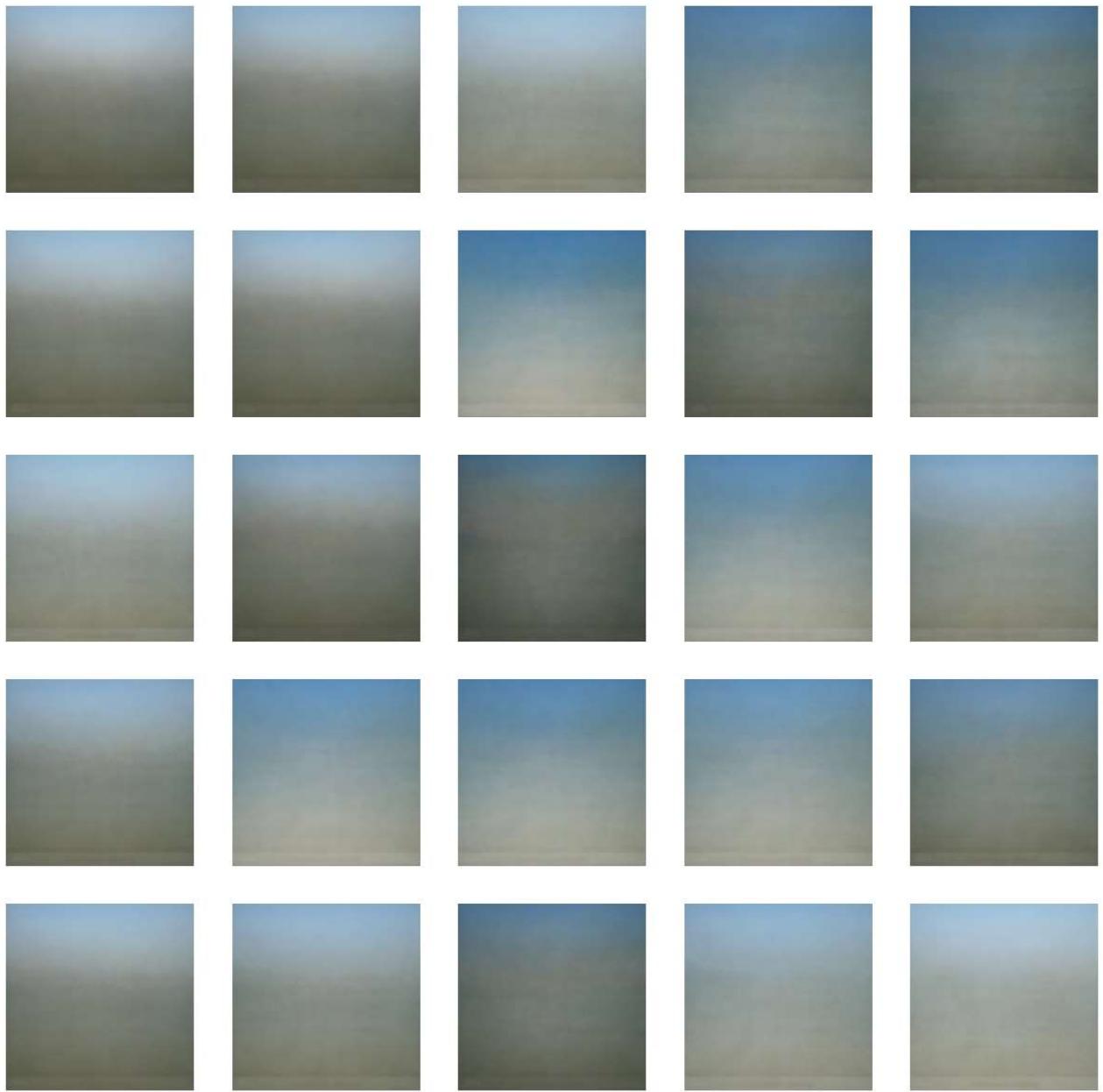
[2023-12-07 12:44:14.103230]: Generating random images for epoch 100 ...



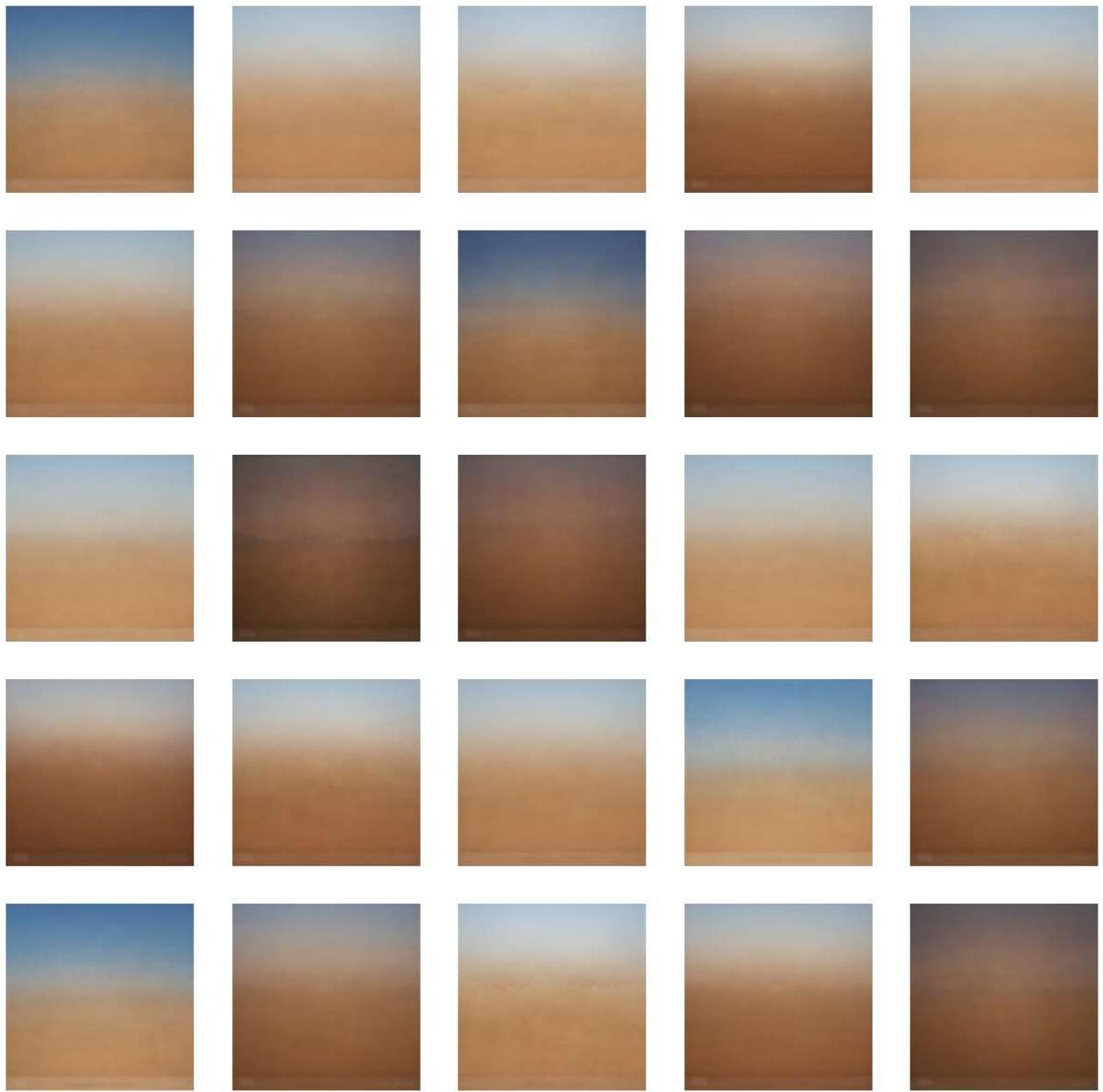
300/300 [=====] - 61s 202ms/step - loss: 480.9980 - reconstruction_error: 479.8768 - regularization_error: 1.1213 - val_loss: 487.7994 - val_reconstruction_error: 486.4997 - val_regularization_error: 1.1202

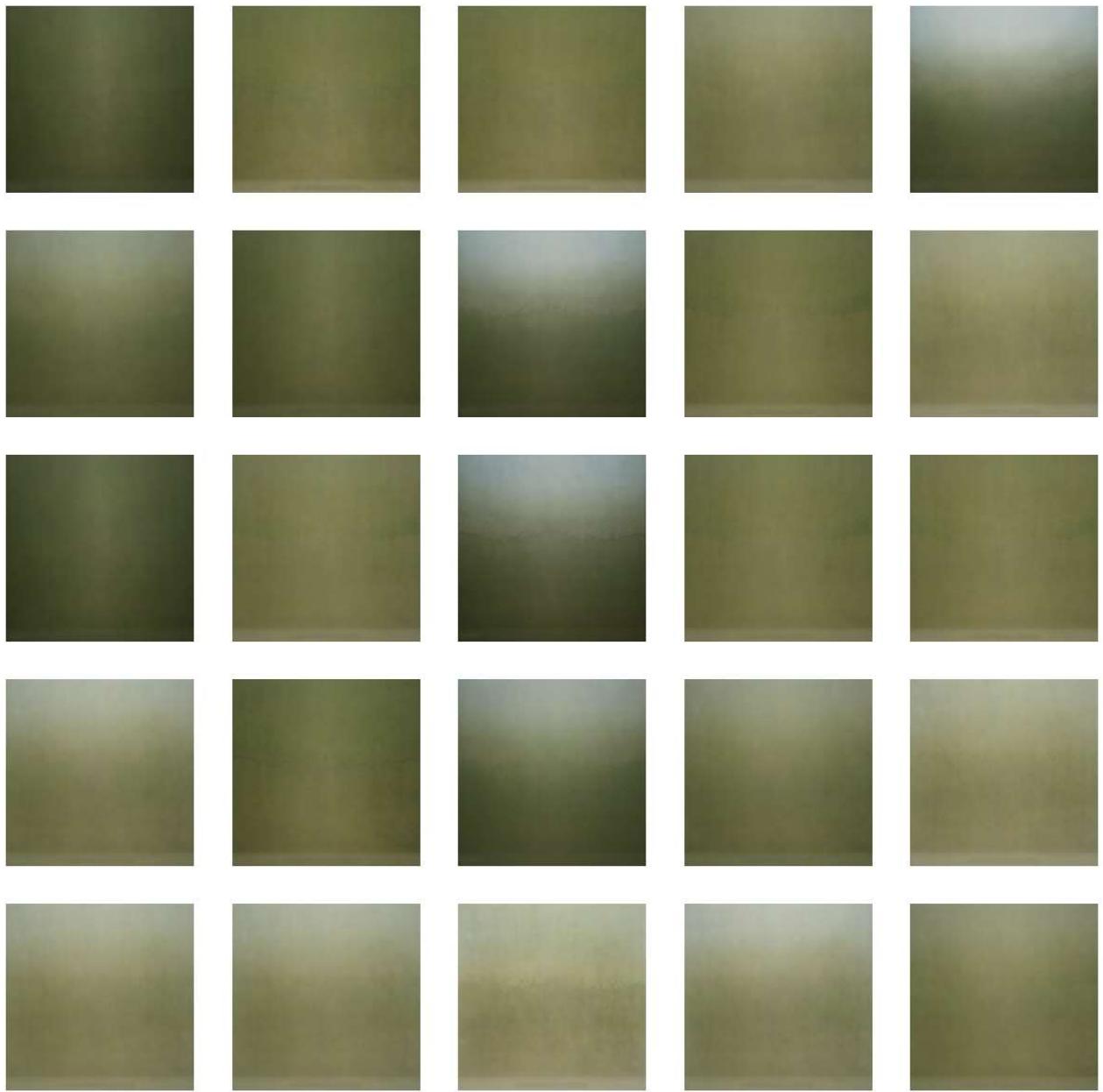


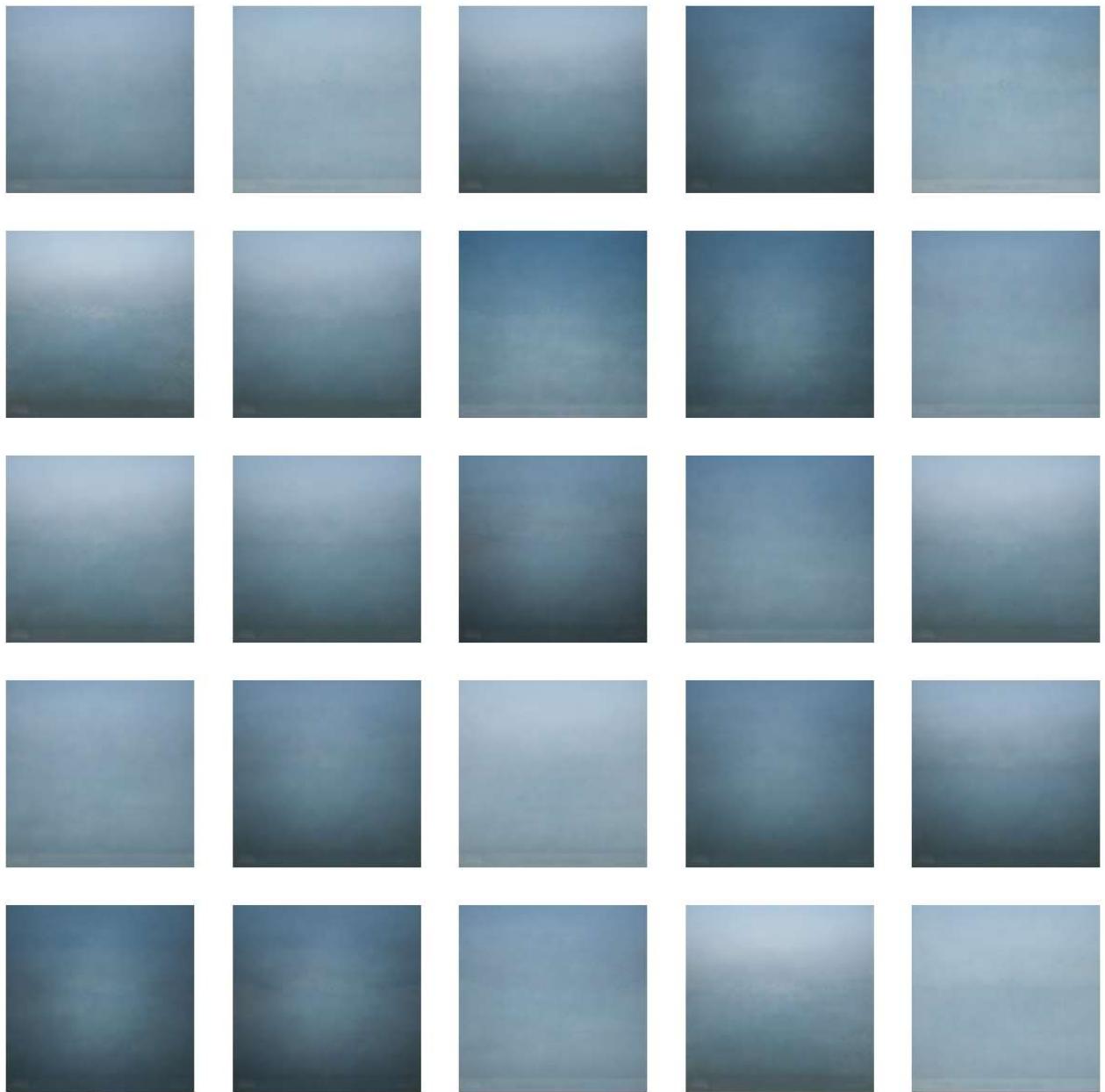
Coasts



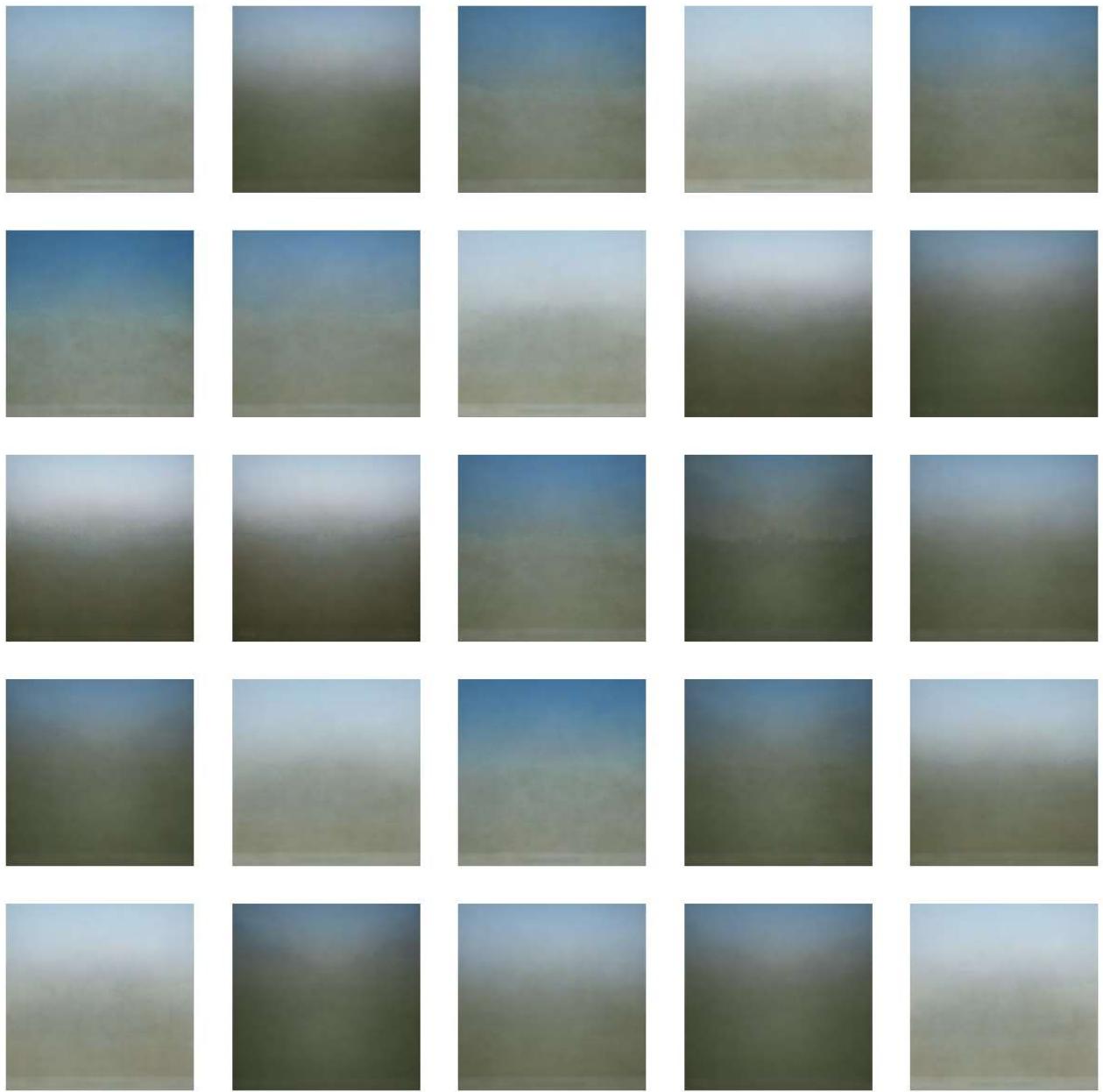
Deserts

**Forests**

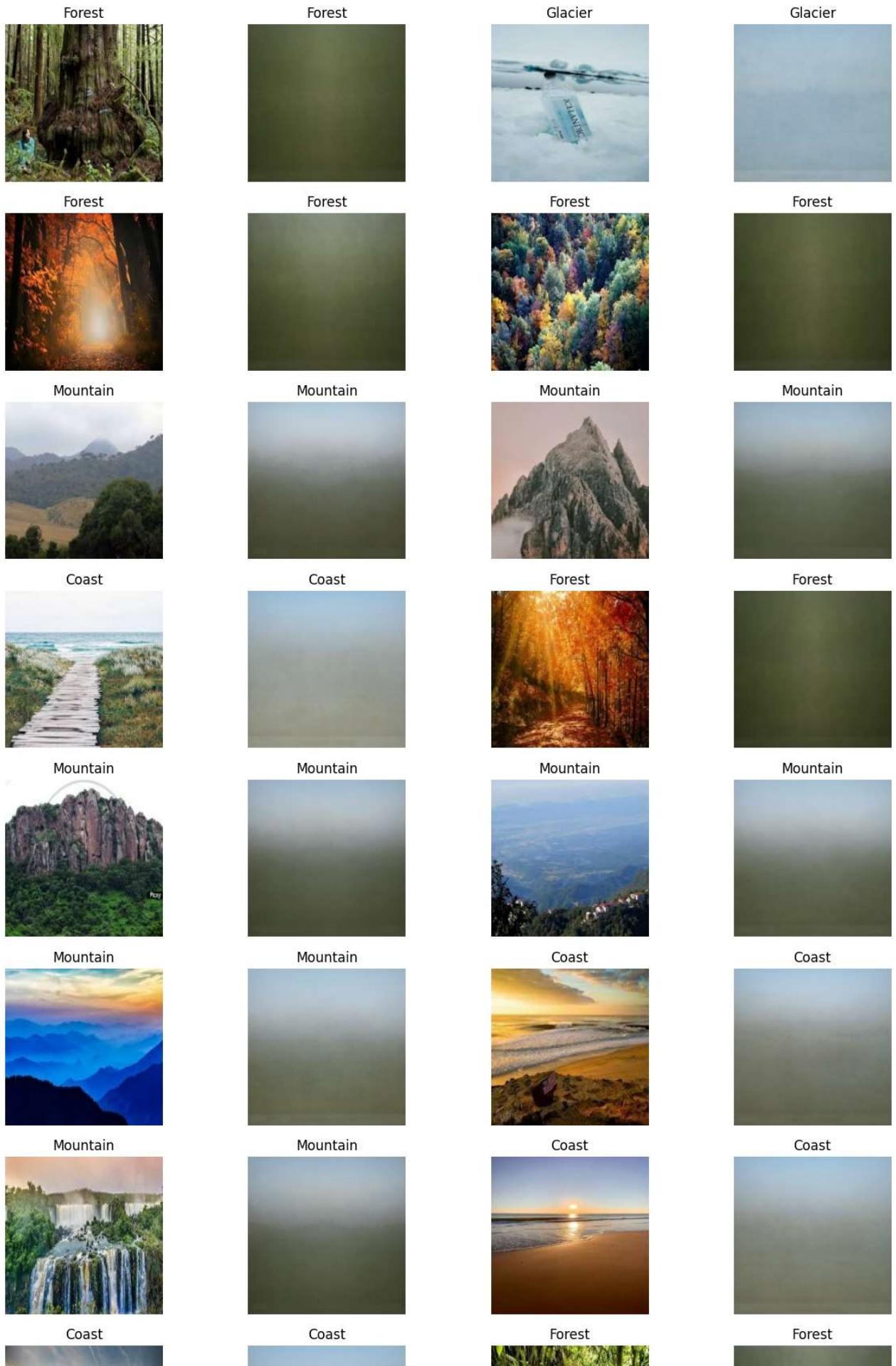
**Glaciers**

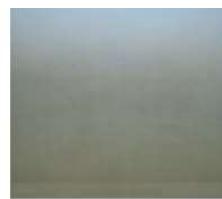


Mountains



Reconstruction





Performance Summary

```
[2023-12-07 12:46:55.172194]: Configuration
[2023-12-07 12:46:55.172252]: - Preprocessing:
[2023-12-07 12:46:55.172284]:   - Dataset Size: 12000
[2023-12-07 12:46:55.298312]:   - Image Size: (256, 256, 3)
[2023-12-07 12:46:55.412889]:   - Label Size: (5,)
[2023-12-07 12:46:55.413483]:   - Augmentations:
[2023-12-07 12:46:55.413551]:     - Grayscale: No
[2023-12-07 12:46:55.413590]:     - Cut Out: No
[2023-12-07 12:46:55.413620]:   - Architecture:
[2023-12-07 12:46:55.413648]:     - # Classes: 5
[2023-12-07 12:46:55.413679]:     - Code Size: 2
[2023-12-07 12:46:55.413707]:     - Hidden Layers: []
[2023-12-07 12:46:55.413736]:     - CNN Activation: relu
[2023-12-07 12:46:55.413763]:     - Hidden Activation: relu
[2023-12-07 12:46:55.413791]:     - Output Activation: sigmoid
[2023-12-07 12:46:55.413817]:   - Training:
[2023-12-07 12:46:55.413841]:     - Training Set Size: 9600
[2023-12-07 12:46:55.413868]:     - Validation Size: 1200
[2023-12-07 12:46:55.413895]:     - Test Size: 1200
[2023-12-07 12:46:55.413922]:     - Shuffle Size: 1024
[2023-12-07 12:46:55.413949]:     - Batch Size: 32
[2023-12-07 12:46:55.413976]:     - Max Epochs: 100
[2023-12-07 12:46:55.414003]:     - Patience: 100
[2023-12-07 12:46:55.414030]:     - KL Coefficient: 1
[2023-12-07 12:46:55.415033]:     - Optimizer: <keras.src.optimizers.adam.Adam object at 0x7f953caa89d0>
[2023-12-07 12:46:55.415129]:     - Learning Rate: 0.0001
[2023-12-07 12:46:55.415176]:     - Pre-trained: No

[2023-12-07 12:46:55.415225]: Reconstruction & Regularization
[2023-12-07 12:46:55.415261]: Training loss: 477.693542
[2023-12-07 12:46:55.415292]: - Reconstruction Error: 476.568115
[2023-12-07 12:46:55.415320]: - Regularization Error: 1.125555
[2023-12-07 12:46:55.415348]: Validation loss: 487.033905
[2023-12-07 12:46:55.415376]: - Reconstruction Error: 485.549591
[2023-12-07 12:46:55.415405]: - Regularization Error: 1.120155
[2023-12-07 12:46:55.415431]: Test loss: 490.648010
[2023-12-07 12:46:55.415458]: - Reconstruction Error: 488.805969
[2023-12-07 12:46:55.415485]: - Regularization Error: 1.109457

[2023-12-07 12:46:55.415521]: Generation Quality
[2023-12-07 12:46:55.415551]: Coast | accuracy: 0.00% | loss: 16.151
[2023-12-07 12:46:55.415577]: Desert | accuracy: 100.00% | loss: 0.000
[2023-12-07 12:46:55.415739]: Forest | accuracy: 100.00% | loss: 0.007
[2023-12-07 12:46:55.415815]: Glacier | accuracy: 0.00% | loss: 20.194
[2023-12-07 12:46:55.415867]: Mountain | accuracy: 19.53% | loss: 6.781
[2023-12-07 12:46:55.415940]: -----
[2023-12-07 12:46:55.416015]: Average | accuracy: 43.91% | loss: 8.627
```