

API Reference

Climate Engine ARD API

API Version: 1.0-draft.6-SNAPSHOT

Climate Engine Analytics Ready Data (ARD) API

INDEX

1. ASSET API	3
1.1 GET /collections	3
1.2 GET /items	3
2. BATCH API	5
2.1 GET /batch/jobs	5
2.2 GET /batch/jobs/{job_id}	5
2.3 GET /batch/jobs/{job_id}/results	6
3. FLOOD	8
3.1 POST /batch/flood/{flood_type}/{prob}/point	8
3.2 POST /batch/flood/{flood_type}/{prob}/buffer	8
3.3 GET /flood/{flood_type}/{prob}/point	9
3.4 GET /flood/{flood_type}/{prob}/buffer	10
3.5 POST /batch/flood/rcp/{rcp}/{year}/{prob}/point	11
3.6 POST /batch/flood/rcp/{rcp}/{year}/{prob}/buffer	12
3.7 GET /flood/rcp/{rcp}/{year}/{prob}/point	12
3.8 GET /flood/rcp/{rcp}/{year}/{prob}/buffer	13
4. HAZARD	15
4.1 POST /batch/composite/{hazard}/point	15
4.2 POST /batch/composite/{hazard}/buffer	15
4.3 GET /composite/{hazard}/point	16
4.4 GET /composite/{hazard}/buffer	17
5. NEW DATA	18
5.1 POST /index	18

API

1. ASSET API

1.1 GET /collections

Collections

Return the list of available collections from the Asset API.

REQUEST

No request parameters

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

1.2 GET /items

Items

Search the Asset API for items. Can match on collection name, title, or id.

REQUEST

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
collection	string	
title	string	
id	string	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
ARRAY OF OBJECT WITH BELOW STRUCTURE		
id*	string	
collection*	string	
title*	string	
url*	string	1 to 65536 chars

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
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NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

2. BATCH API

2.1 GET /batch/jobs

Get Jobs

List all batch jobs

REQUEST

No request parameters

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
ARRAY OF OBJECT WITH BELOW STRUCTURE		
id*	string	
processId*	string	
created	string	

2.2 GET /batch/jobs/{job_id}

Get Job Status

Retrieve the details of a batch job

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*job_id	string	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
id*	string	
processId*	string	
created	string	
status*	enum	ALLOWED:accepted, running, successful, failed, dismissed An enumeration.
message	string	

NAME	TYPE	DESCRIPTION
started	string	
updated	string	
finished	string	
progress	integer	between 0 and 100
links	array	
href*	string	1 to 65536 chars
title	string	
rel	string	
type	string	
hreflang	string	

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

2.3 GET /batch/jobs/{job_id}/results

Get Job Results

Retrieve the results of a batch job

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*job_id	string	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
job_id*	string	
results	object	
status	enum	ALLOWED:accepted, running, successful, failed, dismissed An enumeration.
error	object	
type*	string	

NAME	TYPE	DESCRIPTION
title	string	
status	integer	
detail	string	
instance	string	
mode	enum	ALLOWED:sync, async, auto An enumeration.
created	string	
started	string	
finished	string	
updated	string	

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3. FLOOD

3.1 POST /batch/flood/{flood_type}/{prob}/point

Get Point Batch

Evaluate the fluvial/pluvial flood risk at a list of point locations.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*flood_type	enum ALLOWED: fluvial, pluvial	
*prob	enum ALLOWED: 5, 10, 20, 50, 100, 200, 250, 500, 1000	

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.2 POST /batch/flood/{flood_type}/{prob}/buffer

Get Buffer Batch

Evaluate the fluvial/pluvial flood risk in a buffer around a list of point locations.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*flood_type	enum ALLOWED: fluvial, pluvial	
*prob	enum ALLOWED: 5, 10, 20, 50, 100, 200, 250, 500, 1000	

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
r	number	DEFAULT:100 Buffer radius in meters.
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.3 GET /flood/{flood_type}/{prob}/point

Get Point

Evaluate the fluvial/pluvial flood risk at a point location.

Returns the flood value in cm.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*flood_type	enum ALLOWED: fluvial, pluvial	
*prob	enum ALLOWED: 5, 10, 20, 50, 100, 200, 250, 500, 1000	

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.4 GET /flood/{flood_type}/{prob}/buffer

Get Buffer

Evaluate the fluvial/pluvial flood risk in a buffer around a point location.

Returns the flood value in cm.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*flood_type	enum ALLOWED: fluvial, pluvial	
*prob	enum ALLOWED: 5, 10, 20, 50, 100, 200, 250, 500, 1000	

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
r	number	Buffer radius in meters.
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.5 POST /batch/flood/rcp/{rcp}/{year}/{prob}/point

Get Rcp Point Batch

Evaluate the fluvial/pluvial flood risk at a list of point locations with a particular RCP scenario.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*rcp	enum	ALLOWED: rcp26, rcp45, rcp85
*year	enum	ALLOWED: 2030, 2050, 2070, 2090
*prob	enum	ALLOWED: 10, 50, 100

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.6 POST /batch/flood/rcp/{rcp}/{year}/{prob}/buffer

Get Rcp Buffer Batch

Evaluate the fluvial/pluvial flood risk in a buffer around a list of point locations with a particular RCP scenario.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*rcp	enum ALLOWED: rcp26, rcp45, rcp85	
*year	enum ALLOWED: 2030, 2050, 2070, 2090	
*prob	enum ALLOWED: 10, 50, 100	

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
r	number	DEFAULT:100 Buffer radius in meters.
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.7 GET /flood/rcp/{rcp}/{year}/{prob}/point

Get Rcp Point

Evaluate the fluvial/pluvial flood risk at a point location with a particular RCP scenario.

Returns the flood value in cm at the specified point location.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*rcp	enum ALLOWED: rcp26, rcp45, rcp85	
*year	enum ALLOWED: 2030, 2050, 2070, 2090	
*prob	enum ALLOWED: 10, 50, 100	

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

3.8 GET /flood/rcp/{rcp}/{year}/{prob}/buffer

Get Rcp Buffer

Evaluate the fluvial/pluvial flood risk in a buffer around a point location with a particular RCP scenario.

Returns the average flood value in cm in the buffer around the specified point location

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*rcp	enum ALLOWED: rcp26, rcp45, rcp85	
*year	enum ALLOWED: 2030, 2050, 2070, 2090	

NAME	TYPE	DESCRIPTION
*prob	enum	
	ALLOWED: 10, 50, 100	

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
r	number	Buffer radius in meters.
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

4. HAZARD

4.1 POST /batch/composite/{hazard}/point

Get Point Batch

Evaluate a hazard at a list of point locations.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*hazard	enum	ALLOWED: wind, wildfire, earthquake

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

4.2 POST /batch/composite/{hazard}/buffer

Get Buffer Batch

Evaluate a hazard in a buffer area around a list of point locations.

Submits a job to the Batch API, and returns the Job ID which can be used to query status or results.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*hazard	enum	ALLOWED: wind, wildfire, earthquake

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
r	number	DEFAULT:100 Buffer radius in meters.
lat*	array	
lon*	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

4.3 GET /composite/{hazard}/point

Get Point

Evaluate a hazard at a lat/lon point location.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*hazard	enum	ALLOWED: wind, wildfire, earthquake

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

4.4 GET /composite/{hazard}/buffer

Get Buffer

Evaluate a hazard using a buffer around a lat/lon point location.

REQUEST

PATH PARAMETERS

NAME	TYPE	DESCRIPTION
*hazard	enum	
ALLOWED: wind, wildfire, earthquake		

QUERY PARAMETERS

NAME	TYPE	DESCRIPTION
r	number	Buffer radius in meters.
*lat	number	Floating point latitude value
*lon	number	Floating point longitude value

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	

5. NEW DATA

5.1 POST /index

Index

Index new asset into Asset API.

REQUEST

REQUEST BODY - application/json

NAME	TYPE	DESCRIPTION
url*	object	
ANY:OF	object	
prop0	string	1 to 65536 chars
prop1	string	
collection*	string	
item_title	string	
item_description	string	
asset_title	string	
asset_description	string	
roles	array	
nodata	number	
nodatavals	array	

RESPONSE

STATUS CODE - 200: Successful Response

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
type	string	
geometry*	object	
ANY:OF	object	
OPTION:1	object	
coordinates*	object	
ANY:OF	object	
0	array	
type	string	
OPTION:2	object	
coordinates*	array	
ANY:OF	object	
0	array	
type	string	

NAME	TYPE	DESCRIPTION
OPTION:3	object	
coordinates*	array	
ANY:OF	object	
0	array	
type	string	
OPTION:4	object	
coordinates*	array	
::props	object	
ANY:OF	object	
0	array	
type	string	
OPTION:5	object	
coordinates*	array	
::props	object	
ANY:OF	object	
0	array	
type	string	
OPTION:6	object	
coordinates*	array	
::props	array	
ANY:OF	object	
0	array	
type	string	
properties*	object	
title	string	
description	string	
start_datetime	object	
ANY:OF	object	
prop0	string	
prop1	string	
end_datetime	object	
ANY:OF	object	
prop0	string	
prop1	string	
created	object	
ANY:OF	object	
prop0	string	
prop1	string	
updated	object	
ANY:OF	object	
prop0	string	
prop1	string	

NAME	TYPE	DESCRIPTION
platform	string	
instruments	array	
constellation	string	
mission	string	
providers	array	
name*	string	
description	string	
roles	array	
url	string	
gsd	object	
ANY:OF	object	
prop0	number	
prop1	integer	
datetime*	object	
ANY:OF	object	
prop0	string	
prop1	string	
id*	string	
bbox*	object	
ANY:OF	object	
0	array	
stac_version	string	
assets*	object	
links*	array	
ANY:OF	object	
OPTION:1	object	
href*	string	
rel*	enum	ALLOWED:next, previous https://github.com/radiantearth/stac-api-spec/blob/master/api-spec.md#paging-extension
type	string	
title	string	
label:assets	string	
method*	enum	ALLOWED:GET, POST https://github.com/radiantearth/stac-api-spec/blob/master/api-spec.md#paging-extension
body	object	
merge	boolean	
OPTION:2	object	
href*	string	
rel*	string	
type	string	
title	string	
label:assets	string	

NAME	TYPE	DESCRIPTION
stac_extensions	array	
collection	string	

STATUS CODE - 422: Validation Error

RESPONSE MODEL - application/json

NAME	TYPE	DESCRIPTION
OBJECT WITH BELOW STRUCTURE		
detail	array	
loc*	array	
msg*	string	
type*	string	