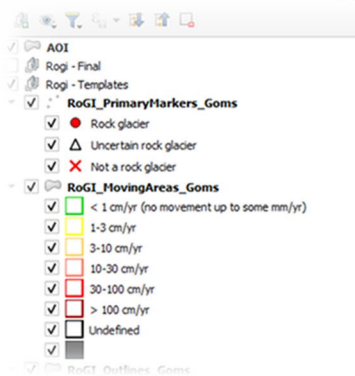




# Rock Glacier Inventories and Kinematics (RGIK)

Rock Glaciers Inventories (RoGI)

## Instructions for RoGI Exercises



<https://www.rgik.org>

27.11.2025

## Preamble

The present document explains the objectives and steps to perform the exercises for inventorying rock glaciers, following the Rock Glacier Inventory (RoGI) guidelines of the Rock Glacier Inventories and Kinematics (RGIK) community, recognized since 2024 as International Permafrost Association (IPA) Standing Committee.

The Rock Glacier Inventory (RoGI) exercises have been inspired by the methodologies from two publications, which recommend a sequence of steps for creating reliable and consensus-based RoGI inventories ([Way et al., 2021](#); [Brardinoni et al., 2019](#)). The RoGI methodology has been tested, adjusted and applied to a gradually increasing number of regions, later converted as RoGI exercises.

The first version of RoGI exercise was designed by R. Delaloye and T. Echelard for an undergraduate course at the University of Fribourg (Switzerland). Initially focusing on two areas in the Swiss Alps, similar exercises have later been created in other regions, to train the international RGIK community in various mountainous environments. The areas selected for the current exercises cover regions around the world with existing inventories generated and disseminated as part of the [ESA CCI Permafrost](#) project ([Rouyet et al., 2025](#)). The exercises comprise various steps for a detailed mapping of rock glaciers and the integration of the resulting data into a Geographic Information System (GIS). All data and instructions are available on [the RGIK website](#).

The RoGI exercises have two main objectives:

1. To apply and illustrate the RoGI process proposed in the Guidelines for inventorying rock glaciers: Baseline and practical concepts (<https://doi.org/10.51363/unifr.srr.2023.002>, also available on RGIK website) , and illustrated in Figure 1;
2. To provide an educational tool for individuals or groups for learning how to compile a RoGI.

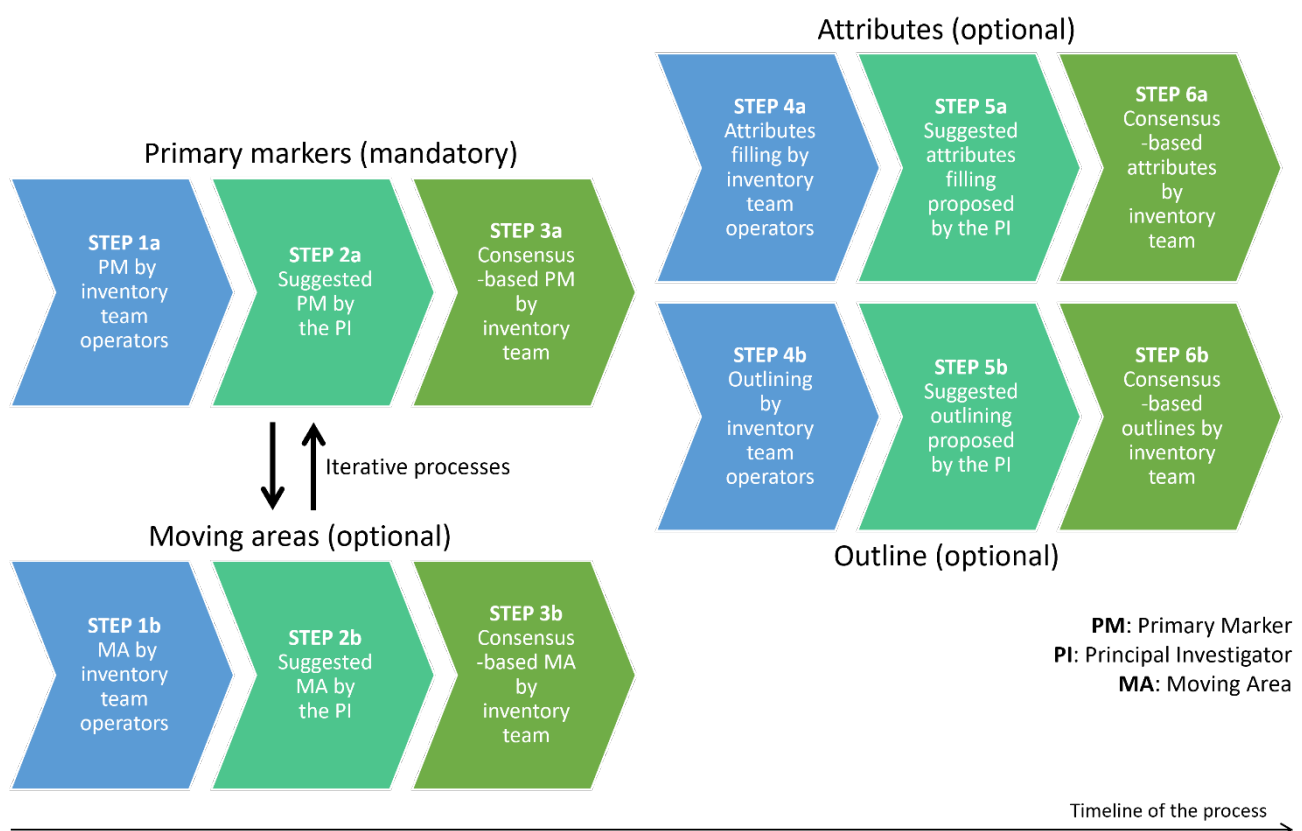


Figure 1 : Schematic view of the recommended RGIK RoGI process

The RoGI process (Steps 1 to 6) was first tested by an 8-person inventory team at the University of Fribourg in 2022, and further applied to 12 areas by teams of 5-10 people ([Rouyet et al., 2025](#)). The steps detailed in the instructions

are recommended for conducting standardized RoGI inventories. For a solid result, a team should consist of several operators, including the Principal Investigator (PI), who harmonized the final decisions based on the team's results. Nevertheless, the RoGI exercises are designed for educational purposes and can also be completed individually. They were developed to support the promotion and application of RGIK guidelines for identifying and characterizing rock glaciers. Result files from the RoGI inventorying teams are provided for each exercise and can be used as a reference for comparing your results after completing the exercise.

For users completing the exercise individually rather than as part of a team, follow this workflow:

1. Perform Step 1 to identify the positions of the Primary Markers (PM) and delineate the Moving Areas (MA).
2. Compare your results with the Final results (*ex. RoGI\_PrimaryMarkers\_AOIname\_final.gpkg*) skipping Steps 2 and 3.
3. After aligning your PM with Final results, proceed to Steps 4, 5 and 6 to fill in the attributes and complete the outline.

This approach presents and explains the full RoGI process while giving individual operators the opportunity to practice detecting, delineating, and characterizing rock glaciers.

For the sake of simplicity, the differences between Rock Glaciers Unit (RGU) and Rock Glaciers Systems (RGS) are not considered at this stage. The exercise only focuses on RGUs.

All the instructions and GIS data information are detailed in the following sections.

In case of troubleshooting or for technical support, please contact RGIK ([info@rgik.org](mailto:info@rgik.org)) or use [the RGIK Slack Forum](#).

## GIS

- QGIS software - [Download QGIS](#) (-> version 3.22 or higher).
- Numbers in the text refer to the GIS tips, found at the end of this document.
- For more general information on QGIS software, refer to the [online manual](#).

## RoGI-QGIS project

The RoGI-QGIS project comprises:

- Layer templates for the operator to edit: *RoGI\_PrimaryMarkers\_AOIname.gpkg*, *RoGI\_Outlines\_AOIname.gpkg*, *RoGI\_MovingAreas\_AOIname.gpkg*.
- Standard QGIS styles for all templates layers.
- Areas Of Interest (AOI) layer showing the extent of the RoGI area.
- A set of InSAR data (interferograms), primarily based on SENTINEL-1 (C-band) satellite imagery in ascending mode (ASC) and descending mode (DESC); D = day, M = month, Y = year). SENTINEL-1 is potentially complemented by InSAR data acquired with other satellites (*e.g.*, ALOS, SAOCOM, TERRASAR-X, COSMO-SKYMED). Data availability varies depending on the area. For more information on the analysis of InSAR data, refer to the [InSAR guidelines](#).
- Background data (Internet connection required):
  - Optical imagery from online services, such as Bing, Google, and ESRI.
  - Additional layers in raster format (digital elevation models, topographical maps, orthophotos, hillshade, etc.), depending on the data availability in the area.

The downloaded folder also contains a \*.kml file of the AOI.

## Other resources

The INSTRUCTIONS folder contains information about each attribute table for the layers to be edited:

- Documentation\_RoGI\_Primary\_Markers.pdf,
- Documentation\_RoGI\_Outlines.pdf,
- Documentation\_RoGI\_Moving\_Areas.pdf.

The 3D view in Google Earth for all AOI can be very useful: <https://earth.google.com/>. For areas in Switzerland, the use of diachronic orthoimages on the Swisstopo portal is also valuable: <https://s.geo.admin.ch/9ab526aedf>. Under *Maps displayed*, click/unclick the 'SWISSIMAGE Journey through Time' feature to assess the historical archive and analyze changes over time. There might be some georeferencing errors, but the overall match of the images is acceptable for qualitative analysis. Under *Advanced tools*, you can import the \*.kml of the AOI outlines.

## Detect and locate the Rock Glacier Units (RGU)

### Step 1a

Step 1a of this exercise must be done after carefully reading the Guidelines for inventorying rock glaciers: Baseline and practical concepts: [Baseline and practical concepts](https://doi.org/10.51363/unifr.srr.2023.002) (<https://doi.org/10.51363/unifr.srr.2023.002>, available on RGIK website), especially sections [3.1-3.4](#) and [5.1-5.2](#).

→ Open the QGIS project **RoGI\_AOIname.qgz**. Within the Area of Interest (AOI), all identified Rock Glacier Units (RGU) should be marked as **points** in the *RoGI\_PrimaryMarkers\_AOIname* layer. Relict rock glaciers are included, but debris-covered glaciers, moraines, and other periglacial landforms must be excluded. InSAR analysis and diachronic visualization of orthoimagery can be useful to detect/confirm and later characterize rock glacier units that are moving faster than the detection threshold of the technique.

To edit the *RoGI\_PrimaryMarkers\_AOIname* layer, select it, and click on the Edit icon (yellow pencil). The two icons to the right of the yellow pencil allow you to add points and modify them ([GIS tip 1](#)).

Each added point is associated with an attribute table, in which only two fields should be filled in for Step 1a:

**“Landform”**: **Rock glacier** if you are certain the landform is a rock glacier. **Uncertain rock glacier** if you are unsure or if the landform is too small to be confident. **Not a rock glacier** if you want to highlight a landform that resemble a rock glacier but is not (e.g., debris-covered glacier, moraine, landslide, others).

**“Comment”**: Enter any additional observations about this point (optional).

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:**

→ When the job is done, save your project and close QGIS. Then rename the file VECTOR\LAYERS\*RoGI\_PrimaryMarkers\_AOIname.gpkg* by adding your name, initials or operator number at the end (*RoGI\_PrimaryMarkers\_AOIname\_YourName.gpkg*).

→ Send your layer *RoGI\_PrimaryMarkersAOIname\_YourName.gpkg* to the PI and wait for feedback from the PI before proceeding to the next steps.

**In the case of an individual exercise, go directly to step 3a.**

### Step 2a

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:**

Based on the individual results of the step 1a, the PI suggests a final solution and makes a suggested PM layer (*RoGI\_PrimaryMarkers\_AOIname\_PI.gpkg*) that will be discussed with the team.

**In the case of an individual exercise, go directly to step 3a.**

### Step 3a

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:**

The inventory team reviews the suggested PM layer, finds consensus if needed and approves the final RGU locations (*RoGI\_PrimaryMarkers\_AOIname\_final.gpkg*). The resulting layer will be used as a standard for the next steps.

**In the case of an individual exercise, the final PM layer is provided in the RESULTS folder (VECTOR\RESULTS\RoGI\_PrimaryMarkers\_AOIname\_final.gpkg). Open this layer in your QGIS project and compare the final results with yours.**

## Detect and characterize the Moving Areas (MA)

### Steps 1b, 2b and 3b (optional)

Steps 1b, 2b and 3b of this exercise must be done after carefully reading the **Section 6 (Kinematic Attribute) of the Guidelines for inventorying rock glaciers:** Baseline and practical concepts (<https://doi.org/10.51363/unifr.srr.2023.002>, also available on RGIK website).

Flow-field kinematic data is required to perform this step. In this case, InSAR datasets are provided. Follow the instructions in the [InSAR guidelines](#) and identify all MA in the *RoGI\_MovingAreas\_AOIname* layer.

The descriptions of the attributes related to the MA polygons are written in the file *INSTRUCTIONS\Documentation\_RoGI\_MovingAreas.pdf*. The attribute table proposes a semi-automatic box dialog for filling the velocity class (Vel.Class) and the reliability of the detected MA (Rel.MA): select the value from the drop-down list ([GIS tip 3](#)).

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:** Steps 2b and 3b are the same as 2a and 3a (*i.e.*, suggested Moving Areas layer by the PI, followed by the consensus-based Moving Areas layer).

**In the case of an individual exercise, the final MA layer is provided in the following folder *VECTOR\RESULTS\RoGI\_MovingAreas\_AOIname\_final.gpkg*. Open this layer in your QGIS project and compare the results with yours.**

## Fill in the rock glacier attributes and draw the outlines

### Step 4a: Fill in the rock glacier attributes

#### Resources:

- Documents related to the attribute table (attributes, values, definitions, etc.) can be found in the file *INSTRUCTIONS\Documentation\_RoGI\_Primary\_Markers.pdf*. Read the instructions carefully before you begin.
- To access and fill in the attribute table form, refer to the [GIS tip 2](#) and [tip 3](#).
- The MA layer from step 3b can be found in *VECTOR\RESULTS\RoGI\_MovingAreas\_AOIname\_final.gpkg*.

→ **Make a copy of the final PM layer from Step 3a** in the folder *VECTOR\LAYERS\*, **rename it to *RoGI\_PM-Attributes\_AOIname\_YourName.gpkg***, and open it in your QGIS project.

→ Fill in the attributes of each rock glacier unit in the *RoGI\_PM-Attributes\_AOIname\_YourName* layer ([GIS tip 2](#)). The attribute table proposes a semi-automatic box dialog for filling the attributes: select the value from the drop-down list ([GIS tip 3](#)). Some attributes appear only if other attributes have been filled in before (*e.g.*, *Kin.Att.* appears only when *Acti.Ass.* = 'Kinematic'; [GIS tip 4](#)). Values and definitions can be found in the layer documentation (*Documentation\_RoGI\_Primary\_Markers.pdf*).

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:**

→ When the job is done, save your project and close QGIS.

→ Send your layer to the PI and proceed to the next step. Remember to include your name, initials or operator number in the file name.

**In the case of an individual exercise, go directly to step 4b.**

### Steps 4b: Draw the outlines

→ Outline the final identified rock glacier units in the *RoGI\_Outlines\_AOIname* layer. Only the **certain** rock glaciers included in the **final PM layer** are considered. To edit the *RoGI\_Outlines\_AOIname* layer, select it, and click on the Edit

icon (yellow pencil). Use the two other icons on the right to add and modify polygons ([GIS tip 5](#)). If possible, draw both the *Restricted* and *Extended* RGU footprints.

→ Fill the attribute table (Outline type and Reliability of the drawing). The attribute table offers a semi-automatic box dialog for filling the attributes: select the value from the drop-down list ([GIS tip 3](#)). Refer to the layer documentation for values and definitions. For automatically import the Primary ID created in the PM table into the Outline table, see [GIS tip 6](#) (optional). If you want to import the Primary ID automatically during polygon creation, the expression should be set as shown in [GIS tip 6](#) **before you start digitising**. If you prefer to import the Primary ID **after completing all polygons**, the values can be updated later by applying the same expression in the Field Calculator. [GIS tip 6.1](#) (optional)

**In the case of a complete inventorying process with a PI and an inventorying team with multiple operators:**

→ When the job is done, save your project and close QGIS. Then rename the file VECTOR\LAYERS\*RoGI\_Outlines\_AOIname.gpkg* by adding your name, initials or operator number at the end (*RoGI\_Outlines\_AOIname\_YourName.gpkg*).

→ Send your Outlines layer to the PI and wait for feedback from the PI before proceeding to the next steps

**In the case of an individual exercise, go directly to step 6.**

## Step 5a/5b

**In the case of a complete inventorying process with a PI and a multi-operator inventorying team:**

Based on the individual results of the steps 4a/4b, the PI makes a suggested PM layer (with filled attributes) and a suggested outline layer. These layers can be named *RoGI\_PM-attributes\_AOIname\_PI* and *RoGI\_Outlines\_AOIname\_PI*, respectively.

**In the case of an individual exercise, go directly to step 6.**

## Step 6a/6b

**In the case of a complete inventorying process with a PI and a multi-operator inventorying team:**

The inventory team has a look at the suggested attributes and outlines, find a consensus if needed and approves the Final results. The resulting layer will be the RoGI consensus-based results of the AOI (*RoGI\_PM-attributes\_AOIname\_final.gpkg* and *RoGI\_Outlines\_AOIname\_final.gpkg*).

Congratulations, the whole inventory process is done!

**In the case of an individual exercise, the final layers are provided in the folder VECTOR\RESULTS\RoGI\_PM-attributes\_AOIname\_final.gpkg and RoGI\_Outlines\_AOIname\_final.gpkg. Open these layers in your QGIS project to compare your results with those of the RGIK team (consensus-based).**

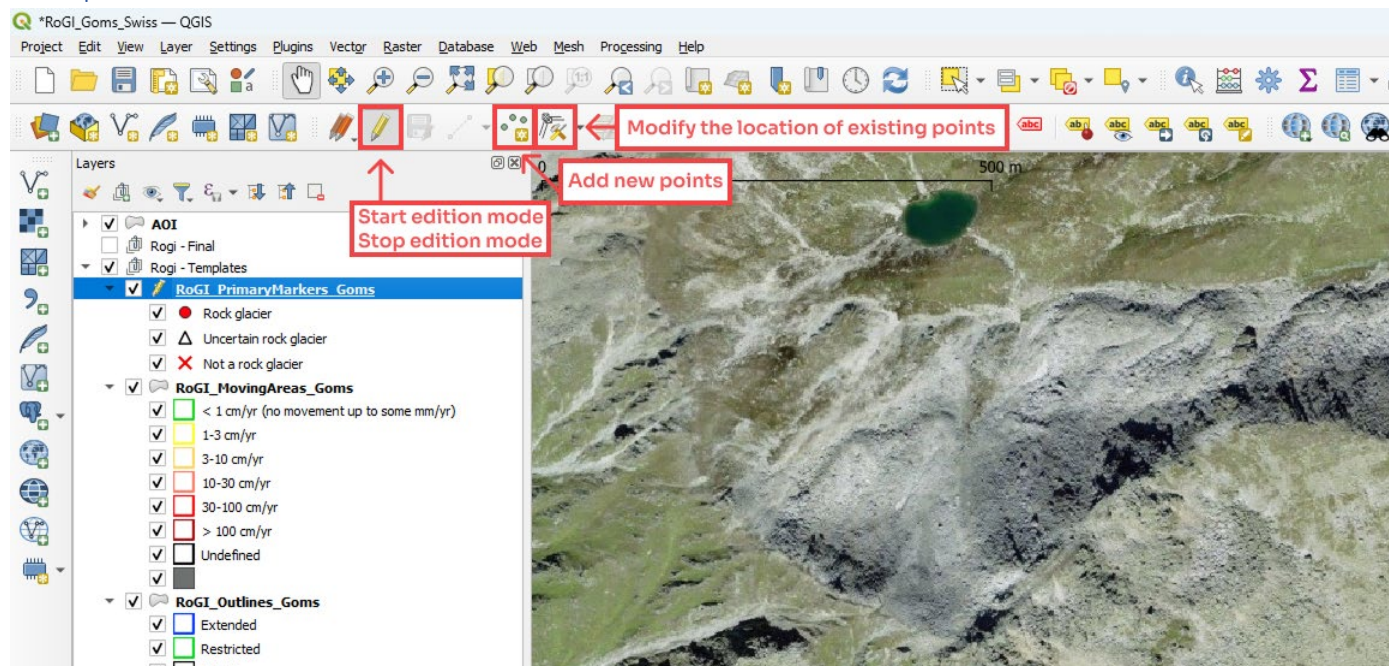
Congratulations, you have fulfilled the exercise!

If you have comments or questions regarding the exercises or further applications of the RoGI guidelines to other areas, please contact us ([rgik@info.org](mailto:rgik@info.org))

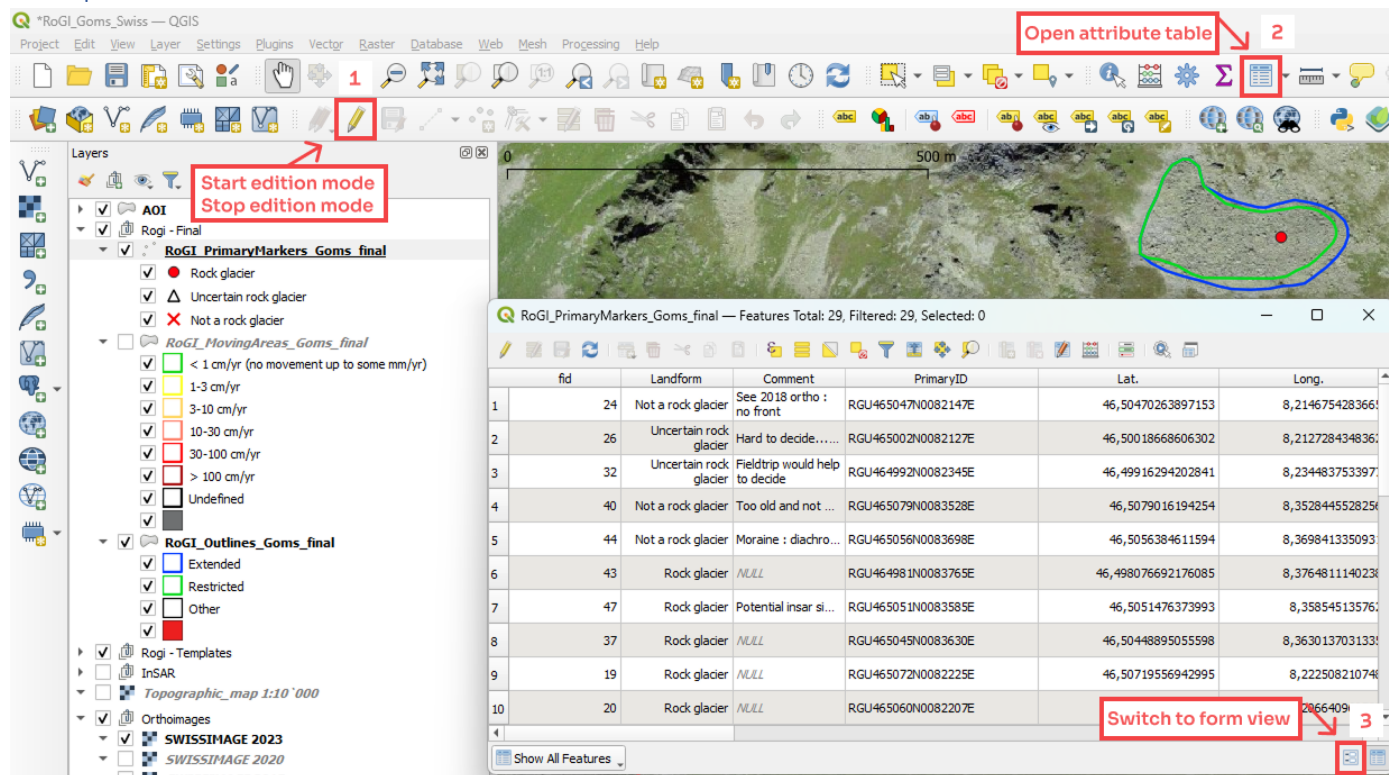


## GIS TIPS

### GIS tip 1



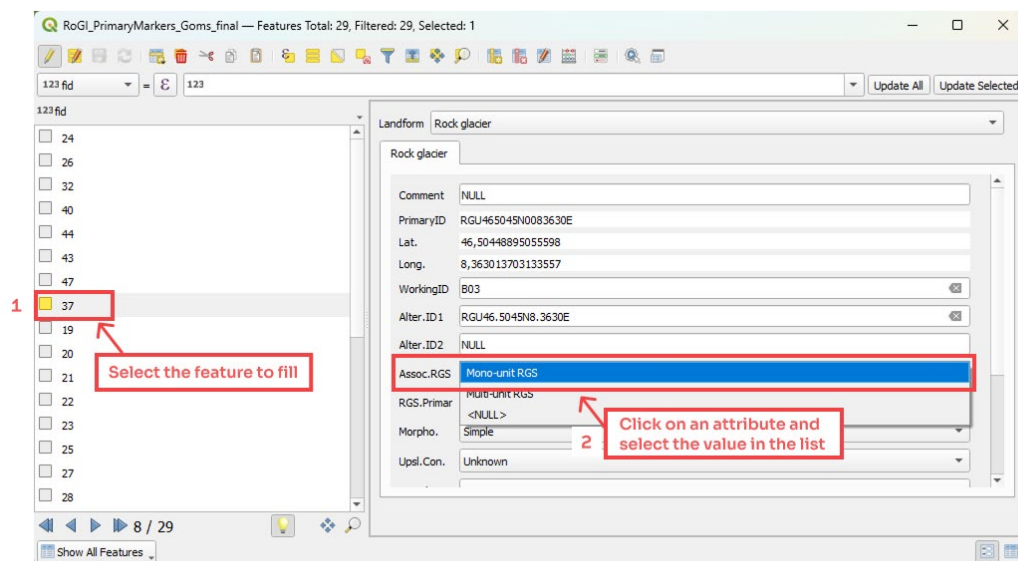
### GIS tip 2



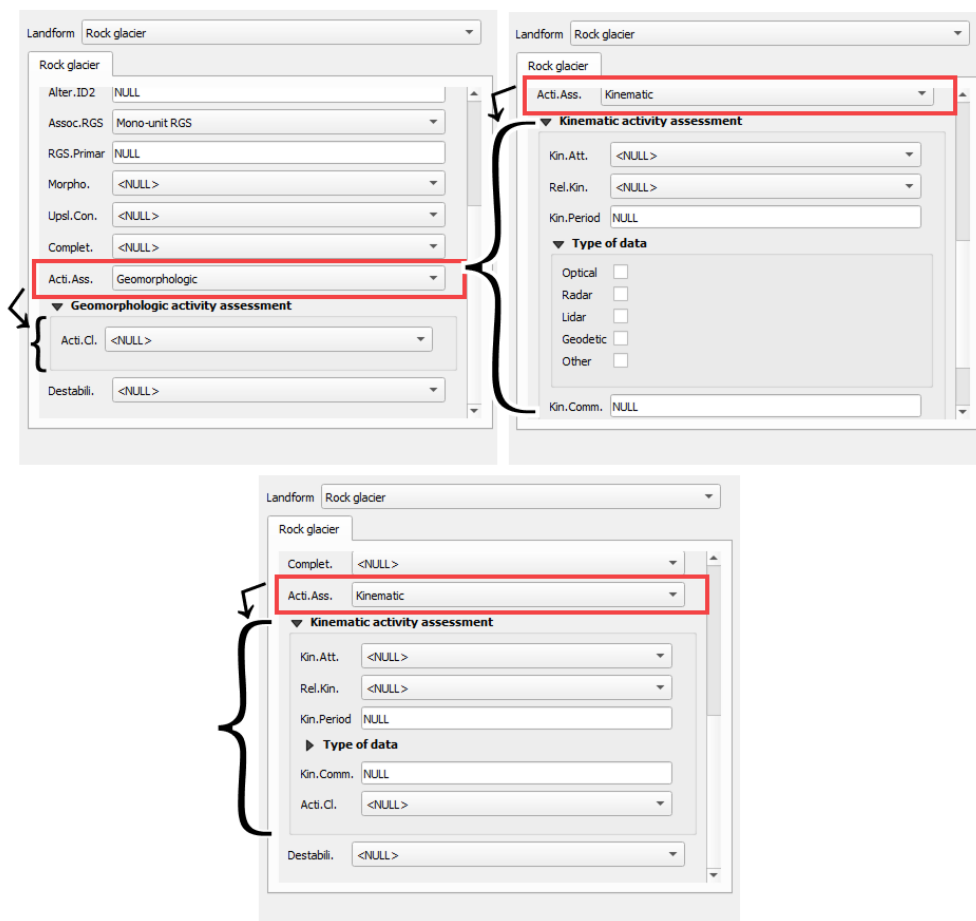


## Rock Glacier Inventories and Kinematics (RGIK)

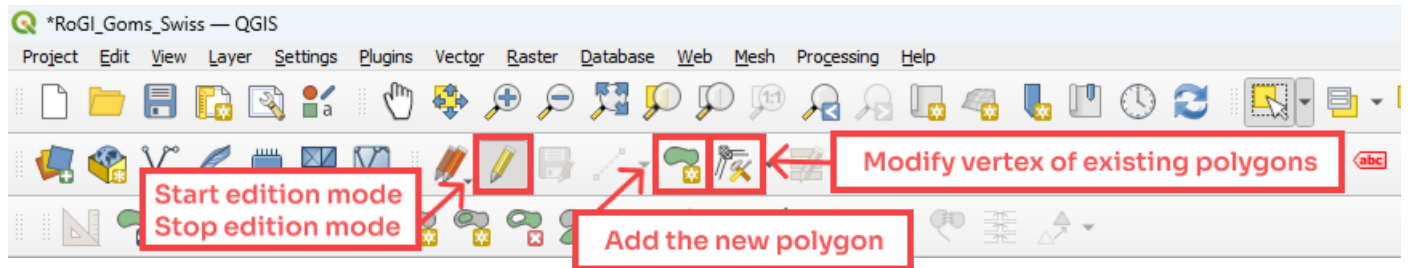
### GIS tip 3



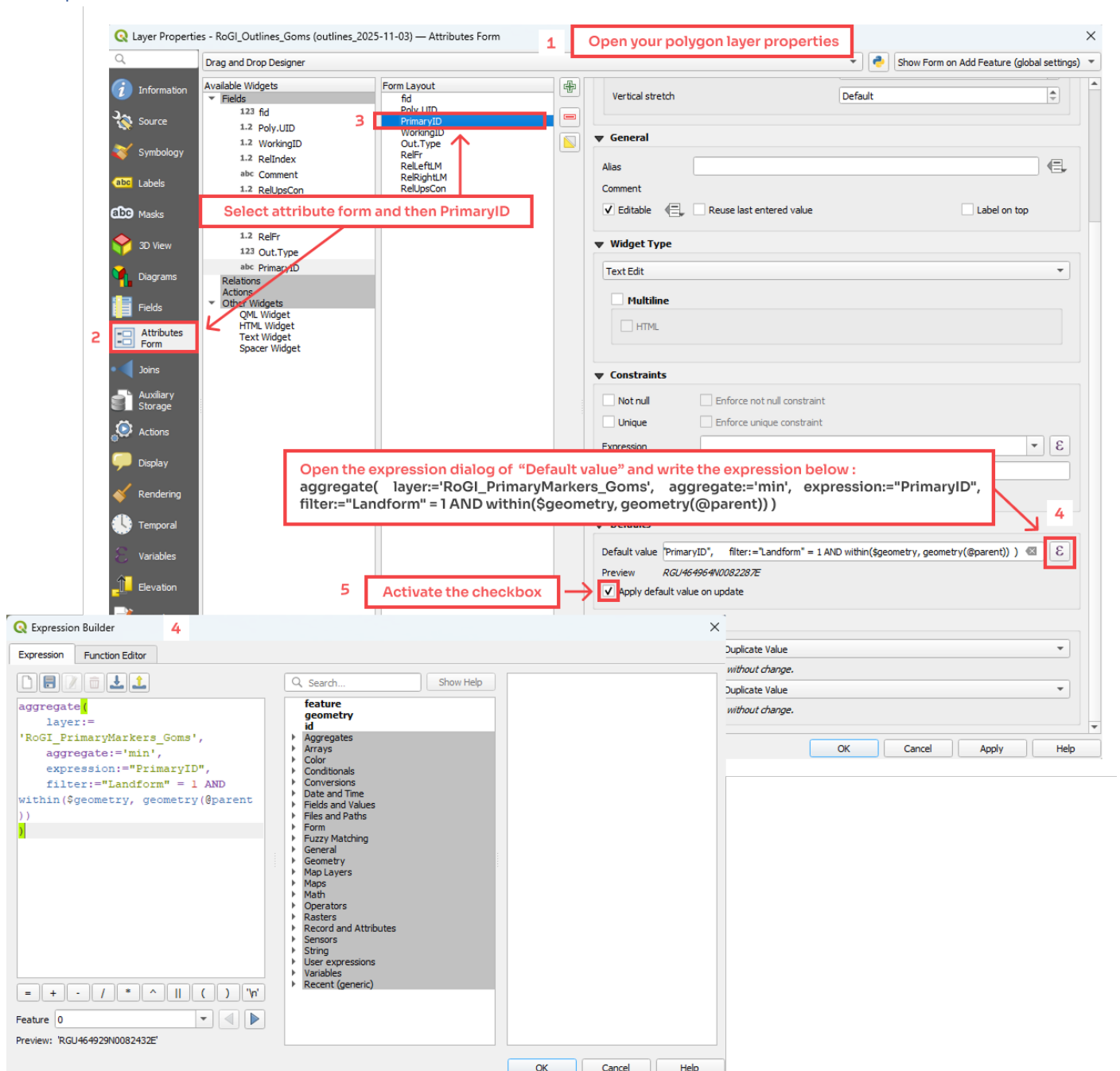
### GIS tip 4



## GIS tip 5



## GIS tip 6



## Rock Glacier Inventories and Kinematics (RGIK)

### GIS tip 6.1

QGIS \*RoGI\_Dirru\_Steintalli\_Swiss — QGIS

Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

1 Start edition mode

2 Open field calculator

3 CTRL+A Select all polygons

4 Activate the checkbox

5 Type the expression

6 Select a field for update

7 Update existing field

8 OK

9 Cancel

10 Apply

11 Help

12 OK

13 Cancel

14 Apply

15 Help

16 OK

17 Cancel

18 Apply

19 Help

20 OK

21 Cancel

22 Apply

23 Help

24 OK

25 Cancel

26 Apply

27 Help

28 OK

29 Cancel

30 Apply

31 Help

32 OK

33 Cancel

34 Apply

35 Help

36 OK

37 Cancel

38 Apply

39 Help

40 OK

41 Cancel

42 Apply

43 Help

44 OK

45 Cancel

46 Apply

47 Help

48 OK

49 Cancel

50 Apply

51 Help

52 OK

53 Cancel

54 Apply

55 Help

56 OK

57 Cancel

58 Apply

59 Help

60 OK

61 Cancel

62 Apply

63 Help

64 OK

65 Cancel

66 Apply

67 Help

68 OK

69 Cancel

70 Apply

71 Help

72 OK

73 Cancel

74 Apply

75 Help

76 OK

77 Cancel

78 Apply

79 Help

80 OK

81 Cancel

82 Apply

83 Help

84 OK

85 Cancel

86 Apply

87 Help

88 OK

89 Cancel

90 Apply

91 Help

92 OK

93 Cancel

94 Apply

95 Help

96 OK

97 Cancel

98 Apply

99 Help

100 OK

101 Cancel

102 Apply

103 Help

104 OK

105 Cancel

106 Apply

107 Help

108 OK

109 Cancel

110 Apply

111 Help

112 OK

113 Cancel

114 Apply

115 Help

116 OK

117 Cancel

118 Apply

119 Help

120 OK

121 Cancel

122 Apply

123 Help

124 OK

125 Cancel

126 Apply

127 Help

128 OK

129 Cancel

130 Apply

131 Help

132 OK

133 Cancel

134 Apply

135 Help

136 OK

137 Cancel

138 Apply

139 Help

140 OK

141 Cancel

142 Apply

143 Help

144 OK

145 Cancel

146 Apply

147 Help

148 OK

149 Cancel

150 Apply

151 Help

152 OK

153 Cancel

154 Apply

155 Help

156 OK

157 Cancel

158 Apply

159 Help

160 OK

161 Cancel

162 Apply

163 Help

164 OK

165 Cancel

166 Apply

167 Help

168 OK

169 Cancel

170 Apply

171 Help

172 OK

173 Cancel

174 Apply

175 Help

176 OK

177 Cancel

178 Apply

179 Help

180 OK

181 Cancel

182 Apply

183 Help

184 OK

185 Cancel

186 Apply

187 Help

188 OK

189 Cancel

190 Apply

191 Help

192 OK

193 Cancel

194 Apply

195 Help

196 OK

197 Cancel

198 Apply

199 Help

200 OK

201 Cancel

202 Apply

203 Help

204 OK

205 Cancel

206 Apply

207 Help

208 OK

209 Cancel

210 Apply

211 Help

212 OK

213 Cancel

214 Apply

215 Help

216 OK

217 Cancel

218 Apply

219 Help

220 OK

221 Cancel

222 Apply

223 Help

224 OK

225 Cancel

226 Apply

227 Help

228 OK

229 Cancel

230 Apply

231 Help

232 OK

233 Cancel

234 Apply

235 Help

236 OK

237 Cancel

238 Apply

239 Help

240 OK

241 Cancel

242 Apply

243 Help

244 OK

245 Cancel

246 Apply

247 Help

248 OK

249 Cancel

250 Apply

251 Help

252 OK

253 Cancel

254 Apply

255 Help

256 OK

257 Cancel

258 Apply

259 Help

260 OK

261 Cancel

262 Apply

263 Help

264 OK

265 Cancel

266 Apply

267 Help

268 OK

269 Cancel

270 Apply

271 Help

272 OK

273 Cancel

274 Apply

275 Help

276 OK

277 Cancel

278 Apply

279 Help

280 OK

281 Cancel

282 Apply

283 Help

284 OK

285 Cancel

286 Apply

287 Help

288 OK

289 Cancel

290 Apply

291 Help

292 OK

293 Cancel

294 Apply

295 Help

296 OK

297 Cancel

298 Apply

299 Help

300 OK

301 Cancel

302 Apply

303 Help

304 OK

305 Cancel

306 Apply

307 Help

308 OK

309 Cancel

310 Apply

311 Help

312 OK

313 Cancel

314 Apply

315 Help

316 OK

317 Cancel

318 Apply

319 Help

320 OK

321 Cancel

322 Apply

323 Help

324 OK

325 Cancel

326 Apply

327 Help

328 OK

329 Cancel

330 Apply

331 Help

332 OK

333 Cancel

334 Apply

335 Help

336 OK

337 Cancel

338 Apply

339 Help

340 OK

341 Cancel

342 Apply

343 Help

344 OK

345 Cancel

346 Apply

347 Help

348 OK

349 Cancel

350 Apply

351 Help

352 OK

353 Cancel

354 Apply

355 Help

356 OK

357 Cancel

358 Apply

359 Help

360 OK

361 Cancel

362 Apply

363 Help

364 OK

365 Cancel

366 Apply

367 Help

368 OK

369 Cancel

370 Apply

371 Help

372 OK

373 Cancel

374 Apply

375 Help

376 OK

377 Cancel

378 Apply

379 Help

380 OK

381 Cancel

382 Apply

383 Help

384 OK

385 Cancel

386 Apply

387 Help

388 OK

389 Cancel

390 Apply

391 Help

392 OK

393 Cancel

394 Apply

395 Help

396 OK

397 Cancel

398 Apply

399 Help

400 OK

401 Cancel

402 Apply

403 Help

404 OK

405 Cancel

406 Apply

407 Help

408 OK

409 Cancel

410 Apply

411 Help

412 OK

413 Cancel

414 Apply

415 Help

416 OK

417 Cancel

418 Apply

419 Help

420 OK

421 Cancel

422 Apply

423 Help

424 OK

425 Cancel

426 Apply

427 Help

428 OK

429 Cancel

430 Apply

431 Help

432 OK

433 Cancel

434 Apply

435 Help

436 OK

437 Cancel

438 Apply

439 Help

440 OK

441 Cancel

442 Apply

443 Help

444 OK

445 Cancel

446 Apply

447 Help

448 OK

449 Cancel

450 Apply

451 Help

452 OK

453 Cancel

454 Apply

455 Help

456 OK

457 Cancel

458 Apply

459 Help

460 OK

461 Cancel

462 Apply

463 Help

464 OK

465 Cancel

466 Apply

467 Help

468 OK

469 Cancel

470 Apply

471 Help

472 OK

473 Cancel

474 Apply

475 Help

476 OK

477 Cancel

478 Apply

479 Help

480 OK

481 Cancel

482 Apply

483 Help

484 OK

485 Cancel

486 Apply

487 Help

488 OK

489 Cancel

490 Apply

491 Help

492 OK

493 Cancel

494 Apply

495 Help

496 OK

497 Cancel

498 Apply

499 Help

500 OK

501 Cancel

502 Apply

503 Help

504 OK

505 Cancel

506 Apply

507 Help

508 OK

509 Cancel

510 Apply

511 Help

512 OK

513 Cancel

514 Apply

515 Help

516 OK

517 Cancel

518 Apply

519 Help

520 OK

521 Cancel

522 Apply

523 Help

524 OK

525 Cancel

526 Apply

527 Help

528 OK

529 Cancel

530 Apply

531 Help

532 OK

533 Cancel

534 Apply

535 Help

536 OK

537 Cancel

538 Apply

539 Help

540 OK

541 Cancel

542 Apply

543 Help

544 OK

545 Cancel

546 Apply

547 Help

548 OK

549 Cancel

550 Apply

551 Help

552 OK

553 Cancel

554 Apply

555 Help

556 OK

557 Cancel

558 Apply

559 Help

560 OK

561 Cancel

562 Apply

563 Help

564 OK

565 Cancel

566 Apply

567 Help

568 OK

569 Cancel

570 Apply

571 Help

572 OK

573 Cancel

574 Apply

575 Help

576 OK

577 Cancel

578 Apply

579 Help

580 OK

581 Cancel

582 Apply

583 Help

584 OK

585 Cancel

586 Apply

587 Help

588 OK

589 Cancel

590 Apply

591 Help

592 OK

593 Cancel

594 Apply

595 Help

596 OK

597 Cancel

598 Apply

599 Help

600 OK

601 Cancel

602 Apply

603 Help

604 OK

605 Cancel

606 Apply

607 Help

608 OK

609 Cancel

610 Apply

611 Help

612 OK

613 Cancel

614 Apply

615 Help

616 OK

617 Cancel

618 Apply

619 Help

620 OK

621 Cancel

622 Apply

623 Help

624 OK

625 Cancel

626 Apply

627 Help

628 OK

629 Cancel

630 Apply

631 Help

632 OK

633 Cancel

634 Apply

635 Help

636 OK

637 Cancel

638 Apply

639 Help

640 OK

641 Cancel

642 Apply

643 Help

644 OK

645 Cancel

646 Apply

647 Help

648 OK

649 Cancel

650 Apply

651 Help

652 OK

653 Cancel

654 Apply

655 Help

656 OK

657 Cancel

658 Apply

659 Help

660 OK

661 Cancel

662 Apply

663 Help

664 OK

665 Cancel

666 Apply

667 Help

668 OK

669 Cancel

670 Apply

671 Help

672 OK

673 Cancel

674 Apply

675 Help

676 OK

677 Cancel

678 Apply

679 Help

680 OK

681 Cancel

682 Apply

683 Help

684 OK

685 Cancel

686 Apply

687 Help

688 OK

689 Cancel

690 Apply

691 Help

692 OK

693 Cancel

694 Apply

695 Help

696 OK

697 Cancel

698 Apply

699 Help

700 OK

701 Cancel

702 Apply

703 Help

704 OK

705 Cancel

706 Apply

707 Help

708 OK

709 Cancel

710 Apply

711 Help

712 OK

713 Cancel

714 Apply

715 Help

716 OK

717 Cancel

718 Apply

719 Help

720 OK

721 Cancel

722 Apply

723 Help

724 OK

725 Cancel

726 Apply

727 Help

728 OK

729 Cancel

730 Apply

731 Help

732 OK

733 Cancel

734 Apply

735 Help

736 OK

737 Cancel

738 Apply

739 Help

740 OK

741 Cancel

742 Apply

743 Help

744 OK

745 Cancel

746 Apply

747 Help

748 OK

749 Cancel

750 Apply

751 Help

752 OK

753 Cancel

754 Apply

755 Help

756 OK

757 Cancel

758 Apply

759 Help

760 OK

761 Cancel

762 Apply

763 Help

764 OK

765 Cancel

766 Apply

767 Help

768 OK

769 Cancel

770 Apply

771 Help

772 OK

773 Cancel

774 Apply

775 Help

776 OK

777 Cancel

778 Apply

779 Help

780 OK

781 Cancel

782 Apply

783 Help

784 OK

785 Cancel

786 Apply

787 Help

788 OK

789 Cancel

790 Apply

791 Help

792 OK

793 Cancel

794 Apply

795 Help

796 OK

797 Cancel

798 Apply

799 Help

800 OK

801 Cancel

802 Apply

803 Help

804 OK

805 Cancel

806 Apply

807 Help

808 OK

809 Cancel

810 Apply

811 Help

812 OK

813 Cancel

814 Apply

815 Help

816 OK

817 Cancel

818 Apply

819 Help

820 OK

821 Cancel

822 Apply

823 Help

824 OK

825 Cancel

826 Apply

827 Help

828 OK

829 Cancel

830 Apply

831 Help

832 OK

833 Cancel

834 Apply

835 Help

836 OK

837 Cancel

838 Apply

839 Help

840 OK

841 Cancel

842 Apply

843 Help

844 OK

845 Cancel

846 Apply

847 Help

848 OK

849 Cancel

850 Apply

851 Help

852 OK

853 Cancel

854 Apply

855 Help

856 OK

857 Cancel

858 Apply

859 Help

860 OK

861 Cancel

862 Apply

863 Help

864 OK

865 Cancel

866 Apply

867 Help

868 OK

869 Cancel

870 Apply

871 Help

872 OK

873 Cancel

874 Apply

875 Help

876 OK

877 Cancel

878 Apply

879 Help

880 OK

881 Cancel

882 Apply

883 Help

884 OK

885 Cancel

886 Apply

887 Help

888 OK

889 Cancel

890 Apply

891 Help

892 OK

893 Cancel

894 Apply

895 Help

896 OK

897 Cancel

898 Apply

899 Help

900 OK

901 Cancel

902 Apply

903 Help

904 OK

905 Cancel

906 Apply

907 Help

908 OK

909 Cancel

910 Apply

911 Help

912 OK

913 Cancel

914 Apply

915 Help

916 OK

917 Cancel

918 Apply

919 Help

920 OK

921 Cancel

922 Apply

923 Help

924 OK

925 Cancel

926 Apply

927 Help

928 OK

929 Cancel

930 Apply

931 Help

932 OK

933 Cancel

934 Apply

935 Help

936 OK

937 Cancel

938 Apply

939 Help

940 OK

941 Cancel

942 Apply

943 Help

944 OK

945 Cancel

946 Apply

947 Help

948 OK

949 Cancel

950 Apply

951 Help

952 OK

953 Cancel

954 Apply

955 Help

956 OK

957 Cancel

958 Apply

959 Help

960 OK

961 Cancel

962 Apply

963 Help

964 OK

965 Cancel

966 Apply

967 Help

968 OK

969 Cancel

970 Apply

971 Help

972 OK

973 Cancel

974 Apply

975 Help

976 OK

977 Cancel

978 Apply

979 Help

980 OK

981 Cancel

982 Apply

983 Help

984 OK

985 Cancel

986 Apply

987 Help

988 OK

989 Cancel

990 Apply

991 Help

992 OK

993 Cancel

994 Apply

995 Help

996 OK

997 Cancel

998 Apply

999 Help

1000 OK

1001 Cancel

1002 Apply

1003 Help

1004 OK

1005 Cancel

1006 Apply

1007 Help

1008 OK

1009 Cancel

1010 Apply

1011 Help

1012 OK

1013 Cancel

1014 Apply

1015 Help

1016 OK

1017 Cancel

1018 Apply

1019 Help

1020 OK

1021 Cancel

1022 Apply

1023 Help

1024 OK

1025 Cancel

1026 Apply

1027 Help

1028 OK

1029 Cancel

1030 Apply

1031 Help

1032 OK

1033 Cancel

1034 Apply

1035 Help

1036 OK

1037 Cancel

1038 Apply

1039 Help

1040 OK

1041 Cancel

1042 Apply

1043 Help

1044 OK

1045 Cancel

1046 Apply

1047 Help

1048 OK

1049 Cancel

1050 Apply

1051 Help

1052 OK

1053 Cancel

1054 Apply

1055 Help

1056 OK

1057 Cancel

1058 Apply

1059 Help

1060 OK

1061 Cancel

1062 Apply

1063 Help

1064 OK

1065 Cancel

1066 Apply

1067 Help

1068 OK

1069 Cancel

1070 Apply

1071 Help

1072 OK

1073 Cancel

1074 Apply

1075 Help

1076 OK

1077 Cancel

1078 Apply

1079 Help

1080 OK

1081 Cancel

1082 Apply

1083 Help

1084 OK

1085 Cancel

1086 Apply

1087 Help

1088 OK

1089 Cancel

1090 Apply

1091 Help

1092 OK

1093 Cancel

1094 Apply

1095 Help

1096 OK

1097 Cancel

1098 Apply

1099 Help

1100 OK

1101 Cancel

1102 Apply

1103 Help

1104 OK

1105 Cancel

1106 Apply

1107 Help

1108 OK

1109 Cancel

1110 Apply

1111 Help

1112 OK

1113 Cancel

1114 Apply

1115 Help

1116 OK

1117 Cancel

1118 Apply

1119 Help

1120 OK

1121 Cancel

1122 Apply

1123 Help

1124 OK

1125 Cancel

1126 Apply

1127 Help

1128 OK

1129 Cancel

1130 Apply

1131 Help

1132 OK

1133 Cancel

1134 Apply

1135 Help

1136 OK

1137 Cancel

1138 Apply

1139 Help

1140 OK

1141 Cancel

1142 Apply

1143 Help

1144 OK

1145 Cancel

1146 Apply

1147 Help

1148 OK

1149 Cancel

1150 Apply

1151 Help

1152 OK

1153 Cancel

1154 Apply

1155 Help

1156 OK

1157 Cancel

1158 Apply

1159 Help

1160 OK

1161 Cancel

1162 Apply

1163 Help

1164 OK

1165 Cancel

1166 Apply

1167 Help

1168 OK

1169 Cancel

1170 Apply

1171 Help

1172 OK

1173 Cancel

1174 Apply

1175 Help

1176 OK

1177 Cancel

1178 Apply

1179 Help

1180 OK

1181 Cancel

1182 Apply

1183 Help

1184 OK

1185 Cancel

1186 Apply

1187 Help

1188 OK

1189 Cancel

1190 Apply

1191 Help

1192 OK

1193 Cancel

1194 Apply

1195 Help

1196 OK

1197 Cancel

1198 Apply

1199 Help

1200 OK

1201 Cancel

1202 Apply

1203 Help

1204 OK

1205 Cancel

1206 Apply

1207 Help

1208 OK

1209 Cancel

1210 Apply

1211 Help

1212 OK

1213 Cancel

1214 Apply

1215 Help

1216 OK

1217 Cancel

1218 Apply

1219 Help

1220 OK

1221 Cancel

1222 Apply

1223 Help

1224 OK

1225 Cancel

1226 Apply

1227 Help

1228 OK

1229 Cancel

1230 Apply

1231 Help

1232 OK

1233 Cancel

1234 Apply

1235 Help

1236 OK

1237 Cancel

1238 Apply

1239 Help

1240 OK

1241 Cancel

1242 Apply

1243 Help

1244 OK

1245 Cancel

1246 Apply

1247 Help

1248 OK

1249 Cancel

1250 Apply

1251 Help

1252 OK

1253 Cancel

1254 Apply

1255 Help

1256 OK

1257 Cancel

1258 Apply

1259 Help

1260 OK

1261 Cancel

1262 Apply

1263 Help

1264 OK

1265 Cancel

1266 Apply

1267 Help

1268 OK

1269 Cancel

1270 Apply

1271 Help

1272 OK

1273 Cancel

1274 Apply

1275 Help

1276 OK

1277 Cancel

1278 Apply

1279 Help

1280 OK

1281 Cancel

1282 Apply

1283 Help

1284 OK

1285 Cancel

1286 Apply

1287 Help

1288 OK

1289 Cancel

1290 Apply

1291 Help

1292 OK

1293 Cancel

1294 Apply

1295 Help

1296 OK

1297 Cancel

1298 Apply

1299 Help

1300 OK

1301 Cancel

1302 Apply

1303 Help

1304 OK

1305 Cancel

1306 Apply

1307 Help

1308 OK

1309 Cancel

1310 Apply

1311 Help

1312 OK

1313 Cancel

1314 Apply

1315 Help

1316 OK

1317 Cancel

1318 Apply

1319 Help

1320 OK

1321 Cancel

1322 Apply

1323 Help

1324 OK

1325 Cancel

1326 Apply

1327 Help

1328 OK

1329 Cancel

1330 Apply

1331 Help

1332 OK

