## INTERNATIONAL HYDROGRAPHIC **ORGANIZATION**

## INTERGOVERNMENTAL OCEANOGRAPHIC COMMISSION (of UNESCO)

## UNDERSEA FEATURE NAME PROPOSAL (See IHO-IOC Publication B-6 and NOTE overleaf)

Note: The boxes will expand as you fill the form.

| Hakuro Seamou                 | unt                                     | Ocean (  | or Sea:   | N/A  |  |
|-------------------------------|---|--|---|--|--|
| ince the feature (            | (\/\c\/\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\ |  |   |  |  |
| ·                             | ************                            | Multiple points  | Multiple lines*   | Multiple<br>polygons*  | Combination of geometries*               |
|                               | Yes                                     |  |   | polygona   | 90001.00                                 |
| clearly distinguishe          | ed when                                 | providing the coordina   | tes below.  |  |  |
| Coordinates:                  |   | Lat (e.g. 63°32.6′N)  22°11.78'N  22°09.08'N  22°07.91'N  22°06.91'N  22°06.06'N  22°05.34'N  22°04.93'N  22°07.50'N  22°10.29'N  22°12.46'N  22°13.49'N  22°15.07'N  22°14.98'N   |   | Long. (e.g. 046°21.3'W)  141°46.69'E  141°46.50'E  141°46.40'E  141°45.34'E  141°42.63'E  141°40.50'E  141°39.29'E  141°39.10'E  141°39.24'E  141°40.55'E  141°40.55'E  141°41.52'E  141°42.77'E   |  |
| Maximum De                    | epth:                                   | 22°13.13'N<br>22°11.78'N<br>22,173 m   | Steepness   | 141°46.  | 11'E<br>69'E                             |
| <b>*</b>                      | ***********                             | 545 m  | Shape:  |  | gular                                    |
| Total Relief:                 |   | 1,628 m  | Dimension   | /Size : 10 l   | $cm \times 15 \text{ km}$                |
| :                             | West N                                  | Mariana Ridge, Higa  | ın Seamount, k  | anro Seamount  |  |
| Chart/Map References:         |   | Shown Unpamed on Map/Chart   |   | Japanese chart #6723 (to be published in July 26, 2019)  |  |
|                               |   | Within Area of Map/Chart:  |   |  |  |
| Name (if a<br>ciated with the | Japan<br>This fe<br>remna<br>reporte    | This undersea feat<br>eature is located on t<br>nt island arc of the a<br>ed age and chemist   | ure name was<br>he rear-arc of t<br>active Mariana<br>ryof the West N   | accredited by JC<br>the West Marian<br>Arc. Ishizuka et a<br>Nariana Ridge.  | UFN in 1994.<br>a Ridge, a<br>ıl. (2010) |
|                               | Maximum De Minimum De Total Relief:     | Maximum Depth:  Minimum Depth:  Minimum Depth:  Total Relief:  West Normalizated with the  Name (if a stated with the stated w | ines the feature (Yes/No):  Line Polygon Multiple points  Yes  Idearly distinguished when providing the coordina  Lat. (e.g. 63°32.6'N 22°11.78'N 22°09.08'N 22°09.98'N 22°06.91'N 22°06.91'N 22°06.19'N 22°06.19'N 22°07.50'N 22°12.46'N 22°11.29'N 22°11.29'N 22°11.46'N 22°13.49'N 22°14.98'N 22°14.98'N 22°14.53'N 22°11.78'N  Maximum Depth: 2,173 m Minimum Depth: 545 m  Total Relief: 1,628 m  West Mariana Ridge, Higa  Shown Named on Map/Chart  Shown Unnamed on Map/Chart  Shown Unnamed on Map/Chart  This feature is located on tremnant island arc of the areported age and chemisti | ines the feature (Yes/No):  Line Polygon Multiple points Multiple lines*  Yes  Idearly distinguished when providing the coordinates below.  Lat. (e.g. 63°32.6'N)  22°11.78'N 22°10.29'N 22°09.08'N 22°07.91'N 22°06.06'N 22°06.06'N 22°05.34'N 22°04.93'N 22°06.19'N 22°07.50'N 22°10.29'N 22°10.29'N 22°12.46'N 22°13.13'N 22°14.98'N 22°14.98'N 22°14.98'N 22°14.78'N 22°11.78'N  Maximum Depth: 2,173 m Steepness Minimum Depth: 545 m Shape:  Total Relief: 1,628 m Dimension  West Mariana Ridge, Higan Seamount, K  Shown Named on Map/Chart Within Area of Map/Chart Within Area of Map/Chart Within Area of Map/Chart This feature is located on the rear-arc of tremnant island arc of the active Mariana reported age and chemistry of the West | Line                                     |

## Planetary Science Letters, 294, 111-122. Note that the undersea feature names in the Japanese chart #6723 largely consists of two major categories. One is relevant to season names or seasonal/annual event in Japan, and the other is to discovering ship (all are fishery boats except one). The names belonging to the former category were mostly accredited by JCUFN in 1994.

| Discovery Facts: | Discovery Date:                | Apr. 1993                       |  |
|------------------|--------------------------------|---------------------------------|--|
|                  | Discoverer (Individual, Ship): | Japanese survey vessel "Takuyo" |  |

|                                   | Date of Survey:  | Apr. and Aug Sep. 1993<br>Dec. 2005            |  |
|-----------------------------------|--|--|--|
|                                   | Survey Ship:   | Japanese survey vessel "Shoyo" and<br>"Takuyo" |  |
|                                   | Sounding Equipement:   | Multibeam echo sounder<br>Seabeam 2112 (2005)  |  |
| Supporting Survey Data, including |  | Seabeam (1993)                                 |  |
| Track Controls:                   | Type of Navigation:  | GPS without Selective Availability<br>(2005)   |  |
|                                   |  | GPS with Selective Availability (1993)         |  |
|                                   | Estimated Horizontal Accuracy, in  | 0.014 nm (26 m) (2005)                         |  |
|                                   | nautical miles (M):  | 0.054 nm (100 m) (1993)                        |  |
|                                   | Survey Track Spacing:  | 1.25 nm  |  |
|                                   | Supporting material can be submitted as Annex in analog or digital form. |  |  |

|              | Name(s):  | JCUFN                           |
|--------------|---|---------------------------------|
|              | Date:   | June 4, 2019                    |
|              | E-mail:   | ico@jodc.go.jp                  |
|              | Organization and Address:                           | Hydrographic and Oceanographic  |
| Proposer(s): |   | Department, Japan Coast Guard   |
|              |   | Kasumigaseki 3-1-1, Chiyoda-ku, |
|              |   | Tokyo 100-8932, Japan           |
|              | Concurrer (name, e-mail, organization and address): |                                 |

| Remarks: | The position of the summit is located in (22°09.24'N, 141°43.14'E). |  |
|----------|---|--|
|          |   |  |

**NOTE**: This form should be forwarded, when completed:

- a) If the undersea feature is located <u>inside the external limit</u> of the territorial sea:
  - to your "National Authority for Approval of Undersea Feature Names" (see Publication B-6) or, if this does not exist or is not known, either to the IHO or to the IOC (see addresses below);
- b) If at least 50 % of the undersea feature is located <u>outside the external limits</u> of the territorial sea:
  - to the IHO or to the IOC, at the following addresses :

| International Hydrographic Organization (IHO) | Intergovernmental Oceanographic Commission (IOC) |
|---|--|
| 4b, Quai Antoine 1er                          | UNESCO   |
| B.P. 445                                      | Place de Fontenoy                                |
| MC 98011 MONACO CEDEX                         | 75700 PARIS                                      |
| Principality of MONACO                        | <u>France</u>                                    |

 Fax: +377 93 10 81 40
 Fax: +33 1 45 68 58 12

 E-mail: info@iho.int
 E-mail: info@unesco.org

 Web: www.iho.int
 Web: http://ioc-unesco.org/

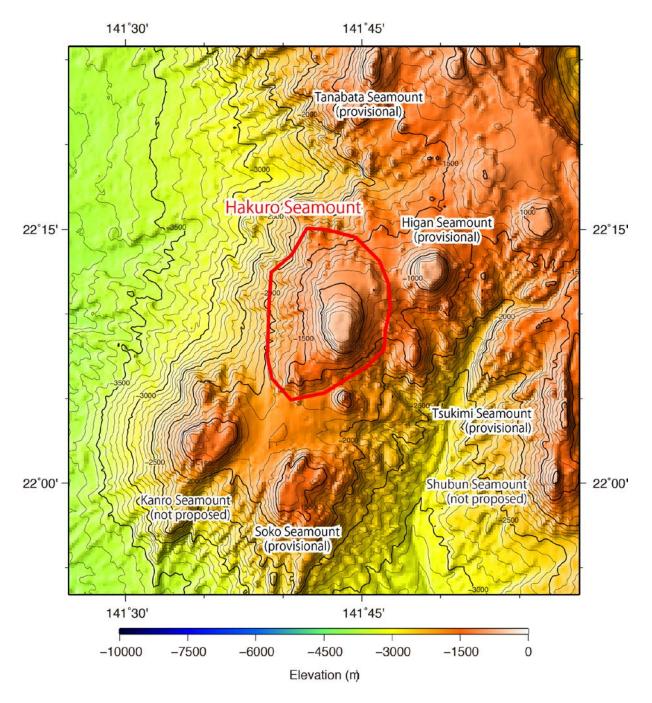


Fig. 1. Bathymetric map of the Hakuro Seamount. Contours are in 100 m.

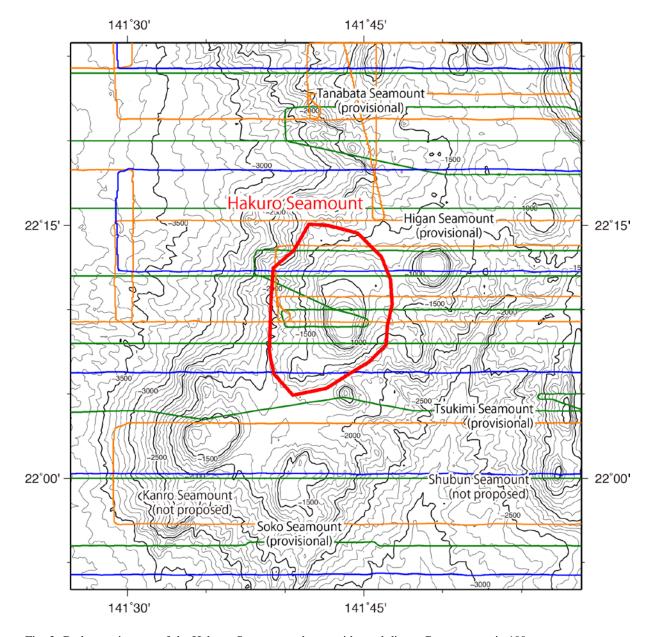


Fig. 2. Bathymetric map of the Hakuro Seamount, shown with track lines. Contours are in 100 m.

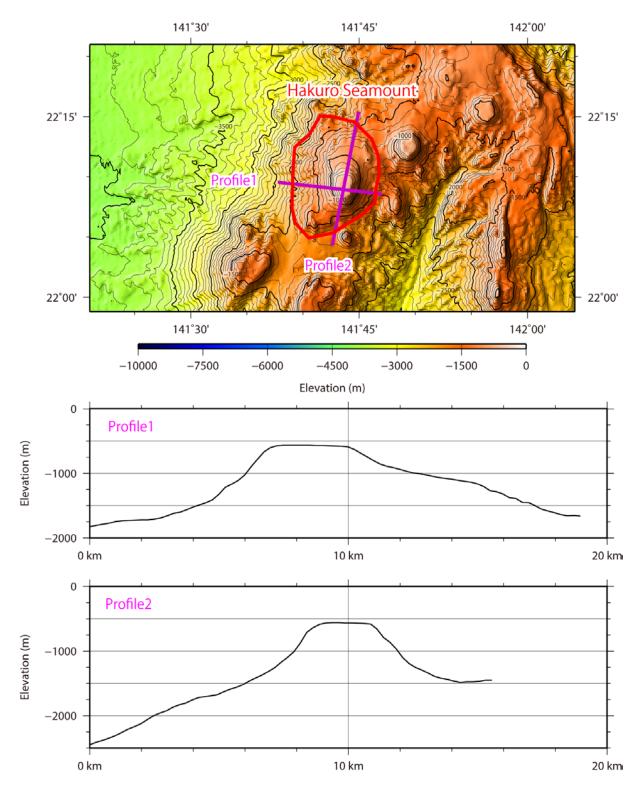


Fig. 3. Bathymetric profile across the Hakuro Seamount.

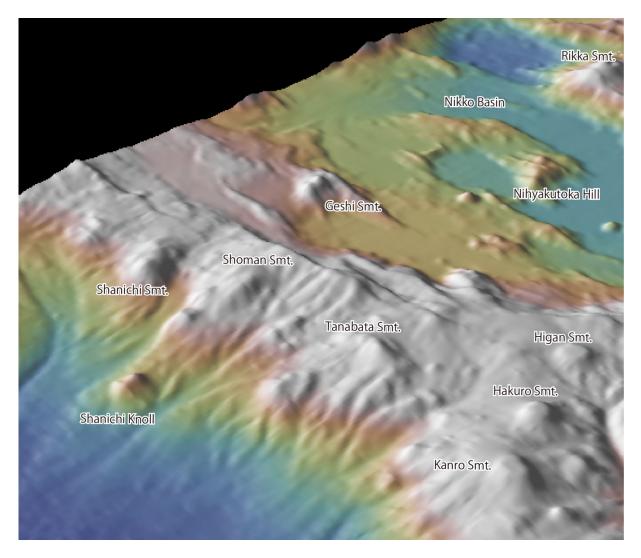


Fig. 4. 3D image of the Hakuro Seamount and its vicinity.