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MLIT



Takeo Office of River, Kyushu Regional Bureau,

Outline of the Basin

Specifications of the basin Geographical properties Basin map Mt. Ten (1,046 m high) and the floodplain area Sefuri-Ter Mount Basin area (catchment): 341 km^2 Basin area (upstream part from the datum point): Nagasaki Expressway en-bashi datum 333.5 km^2 (98%) Main river length: 47 km since around the 6th century. Mt. Hachiman Taku Population in the basin: About 120,000 people 六角川流 (764 m high) City Expected area of flooding: About 201 km² Ogi City Route 34 Population in the expected area of flooding: Legend About 110,000 people Basin boundarv Expected flood area Mutabe Retarding Pond Value of assets in the expected area of flooding: 一一一些大组 Municipal boundar JR Nagasaki About 1.800,000,000,000 yen suffer from inland flooding. Highway Existing retarding Omachi Main municipalities: Takeo, Taku, and Ogi Cities Route 34 Datum poin Town Section under d Takeo Suminoe-basl Kohoku City datum point **Precipitation** Estuar Town JR Sasebo Line (High water flow) 447 ■ The annual mean precipitation is about 2,000 Shiroishi Town Mt .linroku mm, which is about 1.2 times higher than the (447 m high Rokkaku national average (about 1,700 mm). ■ Most of the rainfall occurs in the rainy season (June and July). 西九山 Nishikyushu Expressway 55km - 50 Monthly mean precipitation (for 20 years from 1987 to 2006) Ariake Sea 350 [Profile of the main course and Annual mean Tara 0 1 2 3 4km branches of the Rokkaku River] 300 Mountain About 2 000 mr 250 200 **Geological properties** Land use Industries 150 Mountains, farmland, and housing ■ The basin is a flourishing ■ The midstream and downstream parts rest on an 100 sites account for 37%, 50%, and alluvial layer. agricultural region and the onion 13% of the area of the basin, vield accounts for about 80% of ■ The alluvial layer consists mainly respectively. Saga Prefecture's production of Ariake clay, which is a very 3 4 5 10 11 12 ■ Most of people live in the urban (ranked second in Japan). soft soil layer about 20 m thick 2 6 7 8 area of Takeo, Taku, and Ogi Cities. ■ Takeo City in the upstream part egen of Rokkaku River focuses on Distribution chart of the annual precipitation tourism, particularly hot springs. (average for 20 years from 1987 to 2006) Housing sites Genkai Sea Mountains 37% The onion yield of the municipalities in Farmland the basin of the Rokkaku River in Saga 50% [Changes in the coastline of the Saga Plain] Prefecture Karatsı City 10% Legend The Ariake clay layer under the pasin of the Rokkaku River is Housing sit marine clay that is about 20 m thicl Ogi City and features a high moisture conte Takı Tower gate of the Takeo Hot Spring Ariake Sea Mean high tide +2.66 Takec City Ariake Sea ※国土数値情報 (土地利用メッシュデータ)より (単位:mm) 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21

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■ The main course of the Rokkaku River has a bed slope of about 1/60 in the upstream section, 1/150 to 1/1,000 in the midstream section, and 1/1,500 to 1/45,000 in the downstream section. The Ushidu River, a branch, has a bed slope of about 1/240 in the upstream section, 1/480 to 1/620 in the midstream section, and 1/2,600 to 1/5,600 in the downstream section. The downstream section is low flatland formed due to reclamation work that has been carried on

■ The Ariake Sea has the greatest tidal range (6 m) in Japan.

■ The tidal section extends about 29 km from the mouth of the main course of the Rokkaku River, and about 12 km upstream from the Suminoe Bridge over the Ushidu River, a branch. In this section, sticky soils (called gatado) that are particular to the Ariake Sea accumulate along the river channel.

■ The inland water zone accounts for about 60% of the basin area, so it is apt to





■ Heavy rain in Chugoku and the northern part of Kyushu caused the water level of the Ushidu River to greatly exceed the planned level, resulting in an overflow. The operation of the pump station was adjusted to prevent the midstream and downstream

■ The water level of the Rokkaku River exceeded the planned level at Shinbashi Gauging Station in the midstream section, resulting in large-scale inland water damage mainly to the urban area of Takeo City.



About the Mutabe Retarding Pond

Outline of the pond Ushizu River • Flood storage: About 900,000 m³ • Pond area: About 53 ha **Mutabe Retarding Pond** lokkaku Rive

Mechanism of the retarding pond



(1) At ordinary times, the pond is used as farmland.



(2) When a medium- or small-scale flood occurs, water is fed from the retarding pond to the initial flooding pond and the water is discharged using a pump to avoid submersion.

