



NIWA
Taihoro Nukurangi

SHMAK

Stream Health Monitoring and Assessment Kit

User Manual

DRAFT

Summer 2019–2020

SHMAK OVERVIEW

SHMAK Stream Health Monitoring &
Assessment Kit User Manual

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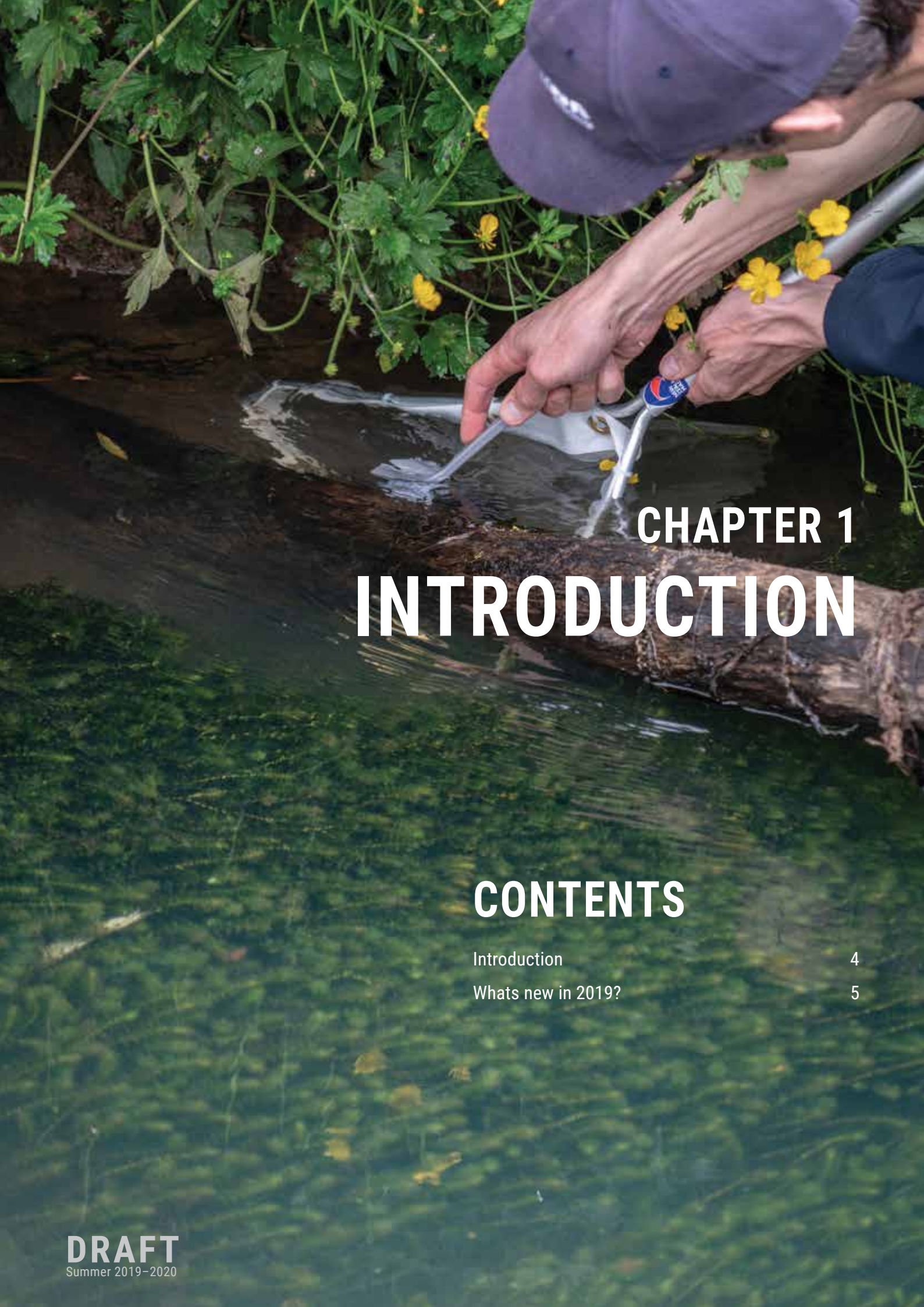
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Visit the NIWA SHMAK website

www.niwa.co.nz/freshwater/tools/shmak

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CHAPTER 1 INTRODUCTION

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INTRODUCTION

For over 20 years, NIWA's Stream Health Monitoring Assessment Kit (SHMAK) has provided land owners, iwi, school and community groups with a simple, scientifically-sound resource to monitor the ecological health of New Zealand's streams.

First released in 1998, SHMAK was developed as a joint project between Federated Farmers and NIWA. The kit and user guide were supported by many organisations and local landcare groups, with funding provided from the Ministry for the Environment's Sustainable Management Fund. A few years later the New Zealand Landcare Trust came on board and, together with continued funding from the Ministry for the Environment, contributed to education and promotion of SHMAK. Additional support was provided by the Kaupapa Taiao Unit of Te Rūnanga o Ngāi Tahu, culminating in the release of Version 2K – A Tool for Kaitiaki in 2002. This version of SHMAK included a strong focus on the principles of Māori scientific research and recognise the pivotal role of iwi in mana whenua, mana moana and kaitiakitanga.

In 2017, a growing interest in New Zealand's fresh water resources, advances in technology – particularly with respect to water quality testing – and a better knowledge of what user groups want and need from the kit, we began revising SHMAK. The kit you see today reflects the valuable input of many organisations and volunteer groups, including financial support from the Ministry for Business Innovation and Employment (MBIE) Envirolink scheme and several regional and city councils.



WHAT'S NEW IN 2019?

The upgraded SHMAK includes:

- a revised suite of equipment and user guide that provide for a more accurate assessment of visual water clarity and new indicators of stream health, including rubbish, dissolved nutrients, and faecal indicator bacteria
- an accompanying suite of training videos produced with Greater Wellington Regional Council, and
- data entry and management tools via a dedicated new website: NZWaterCitizens.co.nz.

As the kit now includes more indicators of stream health, understanding what, when and how to monitor is a little more complex. We recommend spending the time defining the questions you wish to answer about your stream(s) of interest so that you select the most appropriate indicators and methods.

As SHMAK has increased in its scope and public use, we are releasing this manual in draft format to provide users with an opportunity to trial it and provide feedback over the 2019/20 summer field season. This feedback will be used in finalisation of the manual, in particular, to ensure that the methods and supporting information are easy to understand.

Please send you feedback or questions to shmak@niwa.co.nz by 28 February 2020.

Where to from here?

We also encourage users to enter their data on the NZ Water Citizens website (nzwatercitizens.co.nz) and provide feedback through the user forums and contact form on the website. Alternatively, email: shmak@niwa.co.nz.

Enjoy your summer monitoring!