Erratum to

Assessment of Climate Change Impacts on Discharge in the Rhine River Basin: Results of the RheinBlick2050 Project

CHR Report I-23

Görgen, K., Beersma, J., Brahmer, G., Buiteveld, H., Carambia, M., de Keizer, O., Krahe, P., Nilson, E., Lammersen, R., Perrin, C. and Volken, D. (2010) Assessment of Climate Change Impacts on Discharge in the Rhine River Basin: Results of the RheinBlick2050 Project, CHR report, I-23, 229 pp., Lelystad, ISBN 978-90-70980-35-1.

Erratum from 2011-11-03 for content on pages 117 to 119; erratum published on 2012-08-28 referring to CHR Report I-23 (as of 2010-09-19); the report is available as a printed (http://www.chr-khr.org/en/publications) and an online version http://www.chr-khr.org/files/CHR_I-23.pdf (2012-08-28).

In Section 6.3 “Low Flow (FDC_Q90)” the changes in the FDC_Q90 low-flow diagnostic in the original Figure 6-3 show a positive offset of about 5% for all ensemble members in the near and far future.
This error is not included in the data but was introduced during copy-editing of the final plot before being added to the report. No other plots are affected.
The resulting slight change in the figure and the respective interpretation does neither alter the specific low flow results substantially nor the overall results of the report.
The Figure 6-3 has been corrected; the text for Section 6.3 has been rewritten and the conclusions in Section 6.4 for FDC_Q90 have been revised correspondingly.

The complete section 6.3 is to be replaced by the following correction.

6.3 Low Flow (FDC_Q90)

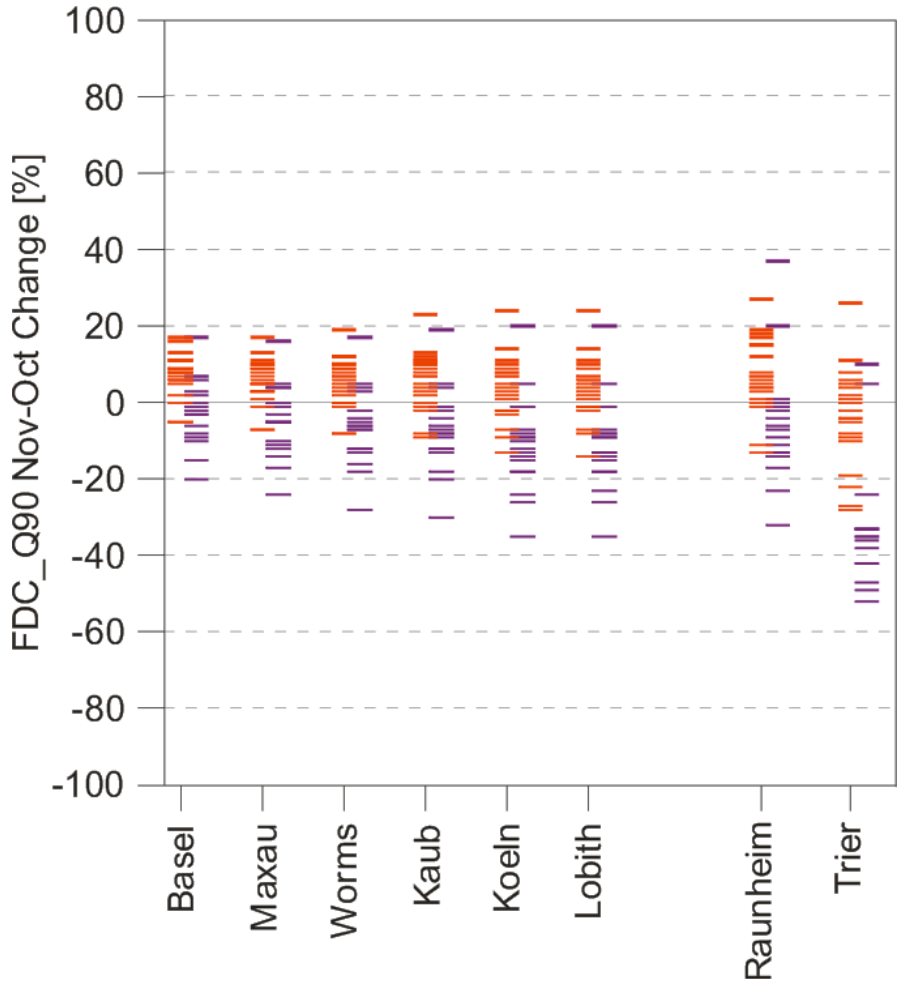

Figure 6-3: Change in low flow characteristics of River Rhine in near future (2021 to 2050; red; 20 members) and far future (2071 to 2100; purple; 17 members) with reference to control period (1961 to 1990 = zero line); expressed as 90th percentile of the 30 year flow duration curves.

With reference to the "near future" (2021 to 2050) the projected FDC_Q90 values show a well defined cluster above the zero line (Figure 6-3), suggesting an increasing tendency with a scenario bandwidth of +0% to +15%. This indication of less extreme low flow situations also holds true for Raunheim while no clear tendency is evident at gauge Trier.

For the "far future" time-slice the bandwidth of simulations is similar as before, but does not show a clear direction of change for gauges upstream of Worms. From Basel (+/-10%) to Worms (-15% to +5%) and Lobith (-20% to 0%) the bandwidth shifts from no tendency towards clear decreases. These regional gradients can also be found on the tributaries. For the Moselle River (-50% to -30% at Trier) a more pronounced decrease is indicated than for the Main River (-20% to 0% at Raunheim).

Only the FDC_Q90 part of the Table 6-2 and the summarizing text box are to be replaced.

6.4 Conclusions

Table 6-2: Scenario bandwidths and tendencies for low flow measures at different gauging stations given as change signal for near (2021 to 2050) and far (2071 to 2100) future. See text for explanation of target measures. Colours indicate directions of change as indicated by the majority of ensemble members: blue = increase; orange = decrease; grey = no tendency; white = no conclusion.

Target measure	Gauge	2021 to 2050	2071 to 2100
FDCQ90	Basel	0 to +15%	+/-10%
	Maxau	0 to +15%	-15 to +5%
	Worms	0 to +15%	-15 to +5%
	Kaub	0 to +15%	-10 to 0%
	Köln	0 to +15%	-20 to -10%
	Lobith	0 to +15%	-20 to -10%
	Raunheim	0 to +20%	-20 to 0 %
	Trier	-10 to +10%	-50 to -30%

FDC_Q90

The directions of change given by the ensemble for the total flow minima (discharge on the lowest 10% of all days in 30 year periods) at the major gauges along the Rhine point to an increase in near future (0 to +15% for 2021 to 2050) and show no clear tendency for far future (+/-10% for 2071 to 2010) for the southern gauges from Basel to Worms. For downstream gauges varying decreases are discernible.