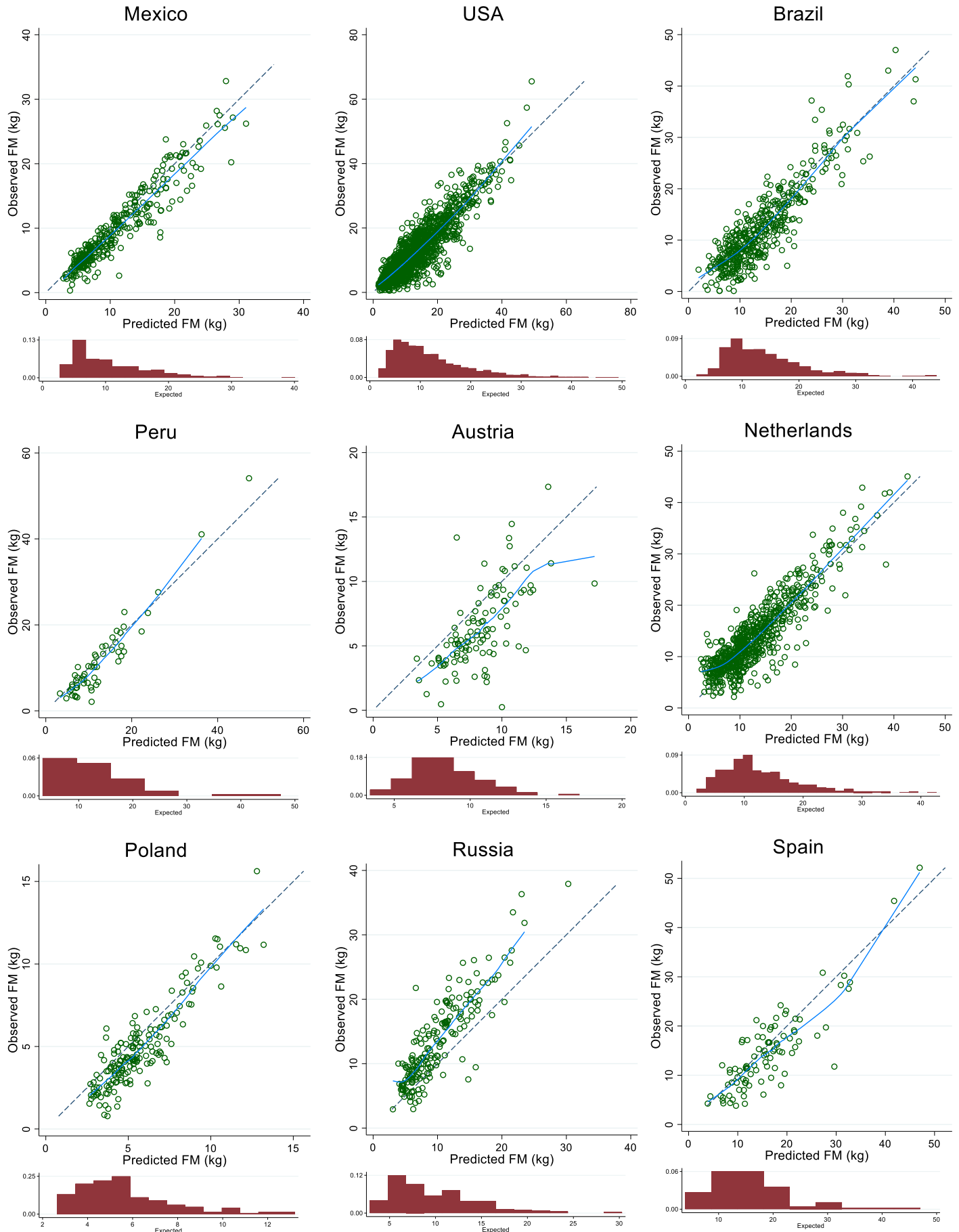


**Addendum Table 1: Country-specific average deuterium dilution observed fat mass levels and Root Mean Square Error for fat mass predictions from the model before and after re-calibration of the intercept term**

Country	N	Median DD fat Mass (kg)	RMSE in terms of fat mass (kg) before re-calibration	RMSE in terms of fat mass (kg) after re-calibration
<i>North America</i>				
Mexico	330	7.55 (5.22 - 12.44)	2.25	1.86
USA	1810	9.09 (5.66 - 15.02)	3.48	3.42
<i>South America</i>				
Brazil	450	10.11 (6.59 - 15.24)	3.99	3.51
Peru	56	9.37 (5.81 - 14.58)	3.06	2.95
<i>Europe</i>				
Austria	107	5.48 (4.21 - 8.49)	3.06	2.37
Netherlands	716	11.89 (8.83 - 16.87)	3.37	3.23
Poland	174	4.27 (3.28 - 5.76)	1.32	1.09
Russia	197	11.28 (8.25 - 17.31)	4.83	2.91
Spain	92	13.66 (8.83 - 17.92)	4.41	4.23
<i>North Africa</i>				
Tunisia	155	8.01 (6.39 - 11.15)	1.87	1.84
<i>Sub-Saharan Africa</i>				
Namibia	151	8.63 (6.07 - 14.50)	2.31	1.70
South Africa	411	5.52 (4.42 - 7.63)	1.64	1.44
<i>South Asia</i>				
Bangladesh	187	2.00 (1.40 - 2.80)	1.61	0.88
Nepal	100	4.20 (3.34 - 5.78)	1.42	1.01
Sri Lanka	288	9.15 (5.23 - 15.34)	3.62	3.43
<i>East Asia</i>				
China	95	6.22 (3.92 - 8.70)	2.74	1.77
Philippines	80	13.81 (9.52 - 17.23)	3.54	3.18
<i>Australasia</i>				
Australia	42	6.56 (4.24 - 11.00)	1.72	1.49
New Zealand	252	9.58 (6.26 - 15.57)	3.37	3.27

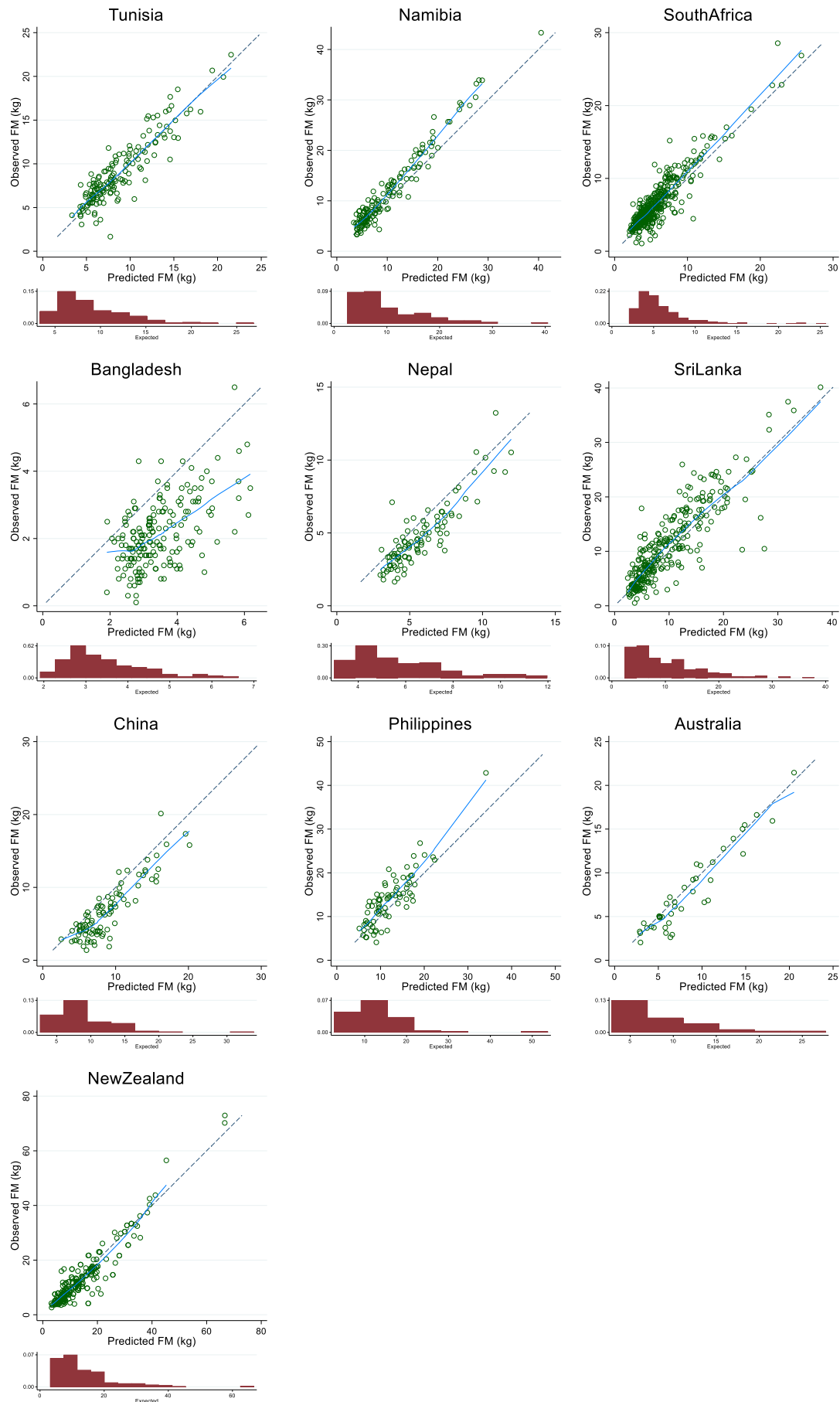
FOOTNOTE: As weight = fat-free mass + fat mass, it follows that the RMSE of fat-free mass = RMSE of fat mass thus the above values relate to the RMSE of both fat-free mass and fat mass

**Addendum Figure 1: Calibration assessment of the model in the Americas and European countries on the fat mass scale, prior to re-calibration of intercept term**



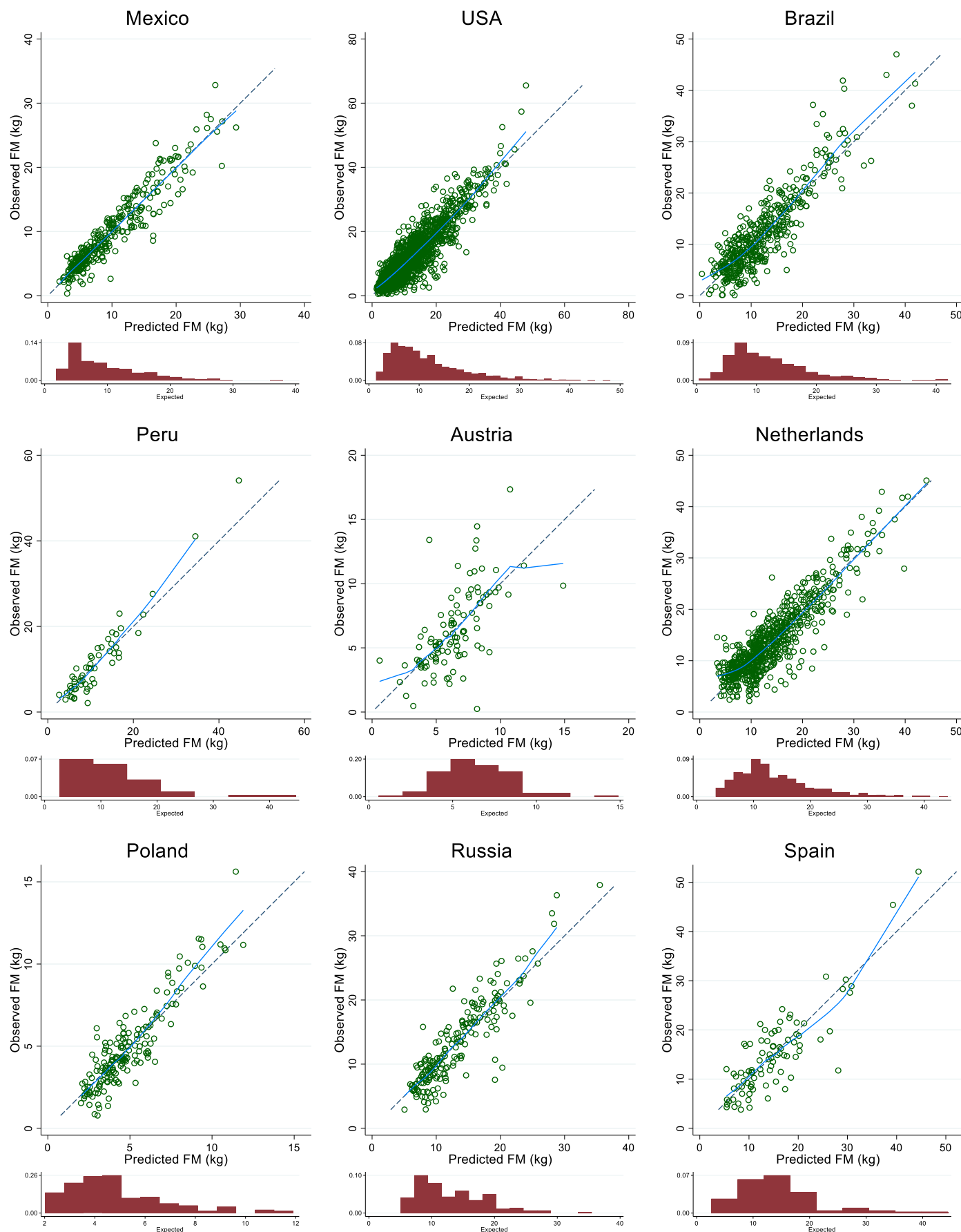
Footnote: Calibration based on fat mass (kilograms). Dashed line represents line of equality. Blue line is a loess smoother through the individual data points. Histogram is the distribution of predicted fat mass in kilograms.

**Addendum Figure 2: Calibration assessment of the model in the African, Asian and Australasian countries on the fat mass scale, prior to re-calibration of intercept term**



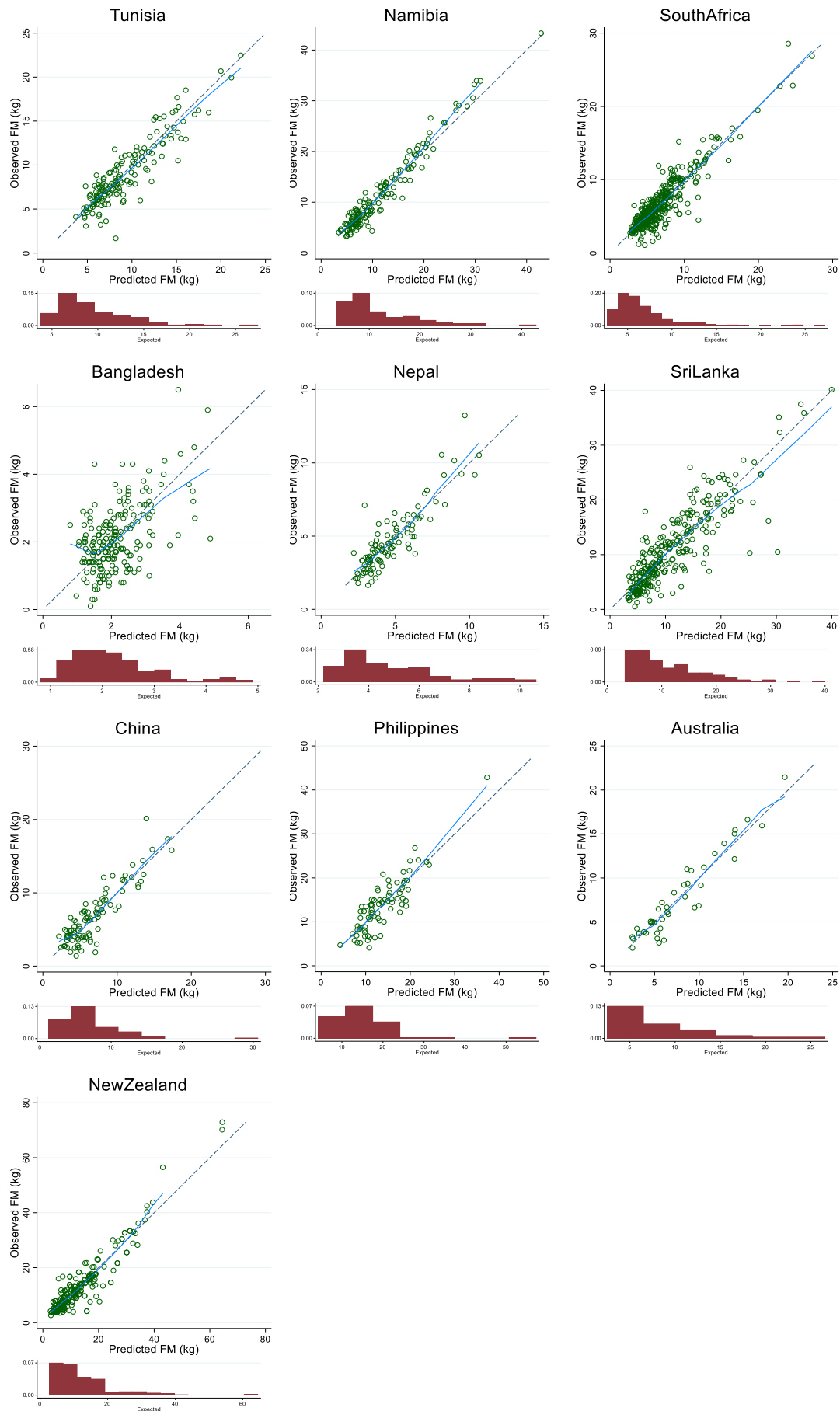
Footnote: Calibration based on fat mass (kilograms). Dashed line represents line of equality. Blue line is a loess smoother through the individual data points. Histogram is the distribution of predicted fat mass in kilograms.

**Addendum Figure 3: Calibration assessment of the model in the Americas and European countries on the fat mass scale, after re-calibration of intercept term**



Footnote: Calibration based on fat mass (kilograms). Dashed line represents line of equality. Blue line is a loess smoother through the individual data points. Histogram is the distribution of predicted fat mass in kilograms.

**Addendum Figure 4: Calibration assessment of the model in the African, Asian and Australasian countries on the fat mass scale, after re-calibration of intercept term**



Footnote: Calibration based on fat mass (kilograms). Dashed line represents line of equality. Blue line is a loess smoother through the individual data points. Histogram is the distribution of predicted fat mass (kilograms).