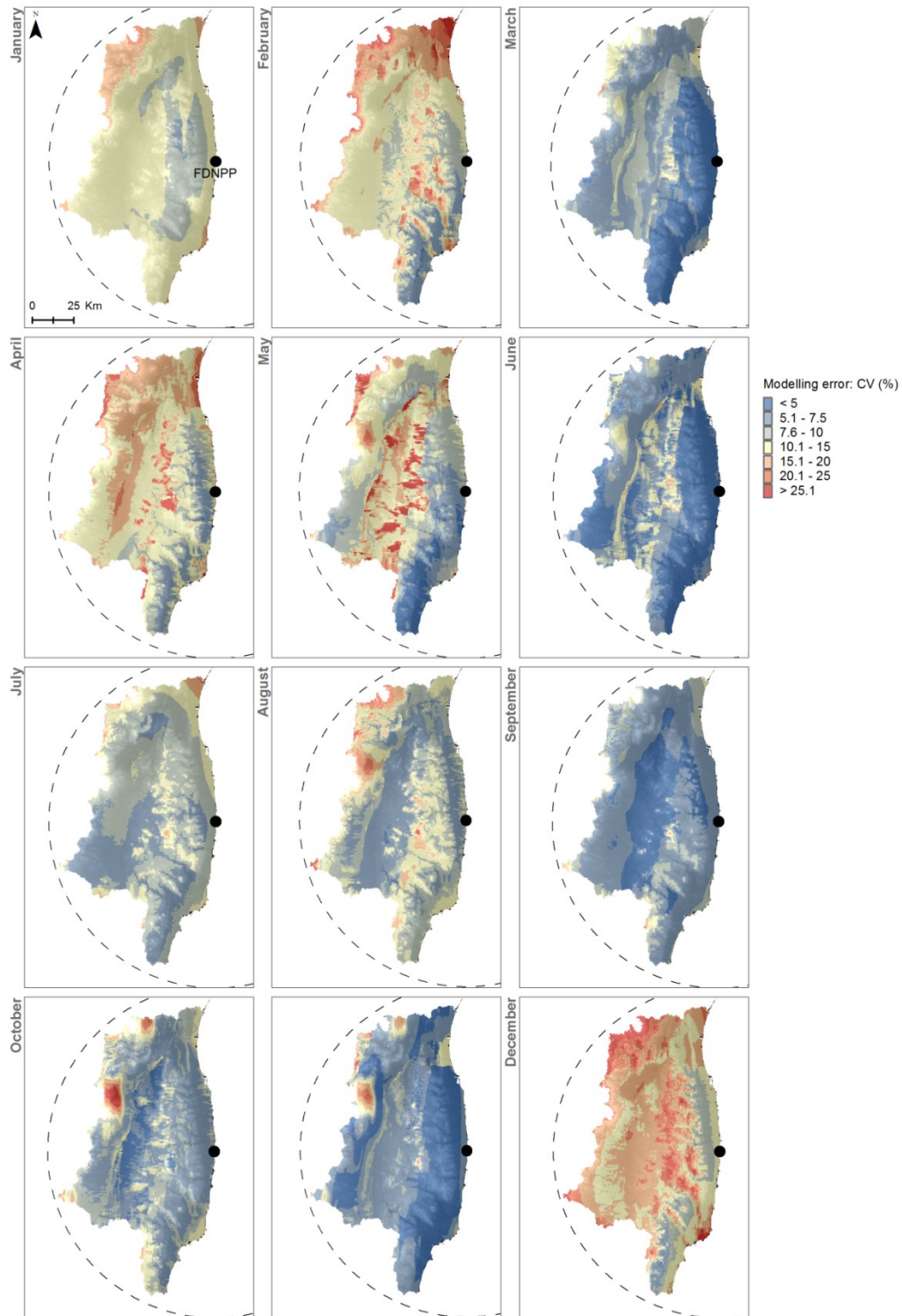


### Supplementary Information:



**Figure S1.** Modelling errors associated to the monthly R-factor maps depicted in Fig. 8.

**Table S1.** Tropical storms and typhoons that impacted the Fukushima Prefecture since the FDNPP accident along with their regional precipitation and rainfall erosivity characteristics.

Storm Name	Peak classification	Mean Event Duration (h)	Event Time Period		Regional Precipitation (mm)			Regional $EI_{30}$ ( $MJ\ mm^{-1}\ ha^{-1}\ h^{-1}$ )		
			Start	Finish	Mean	SD	Max	Mean	SD	Max
Songda	Typhoon	40	28/05/2011	29/05/2011	75	45	192	143	195	930
Ma-on	Typhoon	24	19/07/2011	20/07/2011	79	52	223	410	554	2224
Talas	Severe tropical storm	40	31/08/2011	03/09/2011	63	52	225	256	491	2550
Roke	Typhoon	55	19/09/2011	20/09/2011	231	48	339	1695	1066	5089
Guchol	Typhoon	18	19/06/2012	19/06/2012	104	56	286	676	804	4013
Jelawat	Typhoon	7	30/09/2012	30/09/2012	43	17	95	261	197	953
Toraji	Severe tropical storm	18	04/09/2013	05/09/2013	41	24	117	232	281	1172
Man-yi	Typhoon	19	14/09/2013	15/09/2013	110	46	206	995	792	3373
Wipha	Typhoon	18	15/10/2013	15/10/2013	113	18	151	343	130	711
Francisco	Typhoon	61	20/10/2013	24/10/2013	108	33	191	205	223	1233
Mitag	Tropical storm	24	10/06/2014	11/06/2014	51	26	106	118	124	439
Neoguri	Typhoon	28	08/07/2014	09/07/2014	75	29	150	352	329	1147
Halong	Typhoon	32	07/08/2014	10/08/2014	64	31	130	347	369	1591
Phanfone	Typhoon	28	05/10/2014	05/10/2014	123	37	196	454	373	1595
Vongfong	Typhoon	16	13/10/2014	13/10/2014	93	36	187	580	514	1910
Nangka	Typhoon	18	15/07/2015	16/07/2015	85	45	191	628	760	3813
Etau	Severe tropical storm	90	06/09/2015	09/09/2015	240	125	573	1581	1577	7887