

## DAFTAR PUSTAKA

- Allan R.J., Nicholls N., Phil D. J., Ian J. B. 1991. A Further Extension of the Tahiti-Darwin SOI, Early ENSO Events and Darwin Pressure. *Journal of Climate*. 4: 743-749.
- Andersson, Erik; Thépaut, Jean-Noël. 2008. "ECMWF's 4D-Var data assimilation system - the genesis and ten years in operations"
- BMKG. 2016. Outlook ENSO (El Nino South Oscillation) <http://www.bmkg.go.id> (diakses pada 30 September 2018).
- BOM. 2016. *El Niño Southern Oscillation (ENSO)*, [www.bom.gov.au](http://www.bom.gov.au) (diakses pada 25 September 2018).
- Bradley R. S., Diaz H. F., Kiladis G. N., Eischeid J.K. 1987. *ENSO Signal in Continental Temperature and Precipitation Records*. *Nature*. 327: 497-501
- Chai, T., dan Draxler, R. R. 2014. *Root mean square error (RMSE) or mean absolute error (MAE)? – Arguments against avoiding RMSE in the literature*. *Geoscientific Model Development*. 7 : 1247-1250.
- Climate Prediction Center – National and Atmospheric Administration. <http://www.cpc.ncep.noaa.gov/data/indices/3mth.nino34.81-10.ascii.txt> (diakses pada 1 Oktober 2018)
- ECMWF. 2018. Operational configurations of the ECMWF Integrated Forecasting System (IFS) <https://www.ecmwf.int/en/forecasts/documentation-and-support#Ocean> (diakses pada 2 November 2018)
- Edward, S. Sarachik., dan Mark, A. Cane. 2010. *The El Niño-Southern Oscillation Phenomenon*. Cambridge University Press. New York. 385pp.
- Forrester, J. W. 1987. *Lessons From System Dynamics Modeling*. *Internasional Conference Od The System Dinamics Society*, 136-149.
- Glantz, M. H., 2000: *Currents of Change: El Nino's Impact on Climate and Society*. 2d ed. Cambridge University Press, in press. ,
- Halide, H. 2009. *Eseni Prediksi*. Makassar : Pustaka Pena Press Makassar.206pp.
- Hartmut Crassl. 2000. *Status and Improvements of Coupled General Circulation Models*.
- Hasan, MI. 2003. *Pokok – pokok Materi Statistik 2 (Statistik interensif)* Ed Ke-2. Jakarta: Bumi Aksara
- Hermawan, E.; Juniarti V.; Trismidianto; Krismianto; Ibnu F. dan Ining S., 2010. Pengembangan ekspert sistem berbasis indeks ENSO, DMI, onsun, dan MJO untuk penentuan awal musim, Prosiding pertemuan miah XXIV HFI Jateng & DIY, Semarang, hal. 19-26.



- International Research Institute for Climate and Society.  
<http://iri.columbia.edu/our-expertise/climate/forecast/enso/archive/>  
 `(diakses pada 1 Oktober 2018)
- IRI. 2017. Phase of ENSO [http://iridl.ldeo.columbia.edu/maproom/ENSO/ENSO\\_Info.html](http://iridl.ldeo.columbia.edu/maproom/ENSO/ENSO_Info.html) (diakses pada 2 November 2018).
- JMA. 2013. Outline Of The Operational Numerical Weather Prediction At The Japan Meteorological Agency. Tokyo
- JMA. 2018. Description of JMA's Seasonal Ensemble Prediction System (JMA/MRI-CPS2) [https://ds.data.jma.go.jp/tcc/tcc/products/model/outline/cps2\\_description.html](https://ds.data.jma.go.jp/tcc/tcc/products/model/outline/cps2_description.html) (diakses pada 2 November 2018)
- Kug J. S., Tim L., An S. I., Kang I. S., Luo J. J., Masson S. 2006. *Role of the ENSO–Indian Ocean coupling on ENSO variability in a coupled GCM. Geophysical Research Letters*. 33: L09710.
- Luo J. J., Sebastien M., Erich R., Gurvan M. dan Toshio Yamagata. 2005. *Reducing Climatology Bias in an Ocean–Atmosphere CGCM with Improved Coupling Physics*. *Journal of Climate*. 18: 2344-2360.
- M, Vikas. & G, S Dwarakish.2015. El Nino: A Review.India: International Journal of Earth Sciences and Engineering.V.08, no.02. P.130-137
- Madec, G., P. Delecluse, M. Imbard, and C. Lévy. 1998. OPA 8.1 Ocean General Circulation Model reference manual. Note du Pôle de modélisation (English Version), Institut Pierre-Simon Laplace (IPSL), France, No11, 91pp.
- Moorthi, S., H.-L. Pan, and P. Caplan. 2001. Changes to the 2001 NCEP operational MRF/AVN global analysis/forecast system. NWS Tech. Procedures Bulletin. 484, 14 pp.
- Mulyanti, Heri. 2012. *Pengaruh El Nino/Southern Oscillation (Enso) Terhadap Curah Hujan Bulanan Pulau Jawa*.
- NOAA Climate. 2017. (<https://www.climate.gov/>) diakses pada 27 September 2018
- Pacanowski, R. C., and S. M. Griffies, cited. 1998. MOM 3.0 manual. NOAA/GFDL.
- Palmer T, Hagedorn R. 2006. Predictability of weather and climate. Cambridge University Press.
- Philander, S. George. 1990. *El Nino, La Nina, and the Southern Oscillation*. New York : Academic Press

Dewi Putriyani. 2017. VERIFIKASI PROBABILISTIK PREDIKSI ENSO MODEL DINAMIK OPERASIONAL IRI (INTERNATIONAL RESEARCH INSTITUTE).Skripsi: Universitas Hasanuddin

E., Arpe K., Bengtsson L., Christoph M., Claussen M., Dümenil L., Esch M., Giorgetta M., Schlese U., Schulzweida U. 1996: The atmospheric



general circulation model ECHAM-4: Model description and simulation of present-day climate. Max-Planck-Institut für Meteorologie Rep. 218, 90 pp.

- Safitri, Sani. 2015. *El Nino, La Nina Dan Dampaknya Terhadap Kehidupan Di Indonesia. Jurnal Criksetra, Volume 4, Nomor 8, Agustus 2015.*
- Saha, Suranjana., Shrinivas, Moorthi., Xingren Wu., Jiande Wang., Sudhir Nadiga., Patrick Tripp, David Behringer, Yu-Tai Hou, Hui-ya Chuang, Mark Iredell, Michael Ek, Jesse Meng, Rongqian Yang, Malaquías Peña Mendez, Huug van den Dool, Qin Zhang, Wanqiu Wang, Mingyue Chen and Emily Becker. 2013. The NCEP Climate Forecast System Version 2.
- Shrestha, A. dan R. Kostaschuk. 2005. *El Nino/Southern Oscillation (ENSO)-Related Variability in Mean-Monthly Streamflow in Nepal. Journal of Hydrology* 308: 33 – 49.
- Takaya, Y., S. Hirahara, T. Yasuda, S. Matsueda, T. Toyoda, Y. Fujii, H. Sugimoto, C. Matsukawa, I. Ishikawa, H. Mori, R. Nagasawa, Y. Kubo, N. Adachi, G. Yamanaka, T. Kuragano, A. Shimpo, S. Maeda and T. Ose, 2017: Japan Meteorological Agency/Meteorological Research Institute-Coupled Prediction System version 2 (JMA/MRI-CPS2): atmosphere-land-ocean-sea ice coupled prediction system for operational seasonal forecasting. *Clim. Dyn.*, 3-4, 751-765, doi:10.1007/s00382-017-3638-5.
- Takaya, Y., T. Yasuda, Y. Fujii, S. Matsumoto, T. Soga, H. Mori, M. Hirai, I. Ishikawa, H. Sato, A. Shimpo, M. Kamachi and T. Ose, 2016: Japan Meteorological Agency/Meteorological Research Institute-Coupled Prediction System version 1 (JMA/MRI-CPS1) for operational seasonal forecasting. *Clim. Dyn.*, 48, 1-2, 313-333, doi:10.1007/s00382-016-30769.
- Trenberth K. E. 1997. *The Definition of El Niño. Bulletin of the American Meteorological Society.* 78: 2771-2777.
- Trenberth, K. 2013. *El Niño Southern Oscillation (ENSO).* Encyclopedia of Ocean Sciences, 228-240.
- W. Makridakis dan Mc Gee. 1999. *Metode dan Aplikasi Peramalan.* Edisi kedua, Jakarta: Bina Rupa Aksara
- Walpole. 1982. *Pengantar Statistika.* Jakarta: PT Gramedia Pustaka Utama.
- Wilks D. S. 2006. *Statistical Methods in the Atmospheric Sciences* 2nd Ed. Elsevier. USA. 649pp.



# LAMPIRAN



## LAMPIRAN 1

Data observasi dan prediksi ENSO musiman, yaitu:

### 1. Data NCEP

TAHUN	MUSIM	Data (°C)							
		OBS	LEAD 1	LEAD 2	LEAD 3	LEAD 4	LEAD 5	LEAD 6	LEAD 7
2006	ASO	0.55	0.5	0.2	0.5	0.2	-0.3	-0.3	-0.4
2006	SON	0.8	1	0.6	0.3	0.6	0.3	-0.2	-0.2
2006	OND	0.99	1	1.2	0.6	0.4	0.6	0.3	-0.1
2006	NDJ	0.98	1	1.2	1.4	0.6	0.2	0.5	0.2
2006	DJF	0.67	0.9	1.2	1.4	1.5	0.5	0.1	0.4
2007	JFM	0.23	0.4	0.9	1.3	1.5	1.6	0.4	0.1
2007	FMA	-0.07	-0.3	0.2	0.8	1.2	1.4	1.5	0.4
2007	MAM	-0.23	-0.5	-0.5	0.2	0.7	1	1.2	1.3
2007	AMJ	-0.26	-0.3	-0.6	-0.5	0.1	0.6	0.8	1
2007	MJJ	-0.35	-0.6	-0.6	-0.7	-0.4	0.1	0.5	0.8
2007	JJA	-0.46	-0.7	-1	-1.1	-0.9	-0.5	0	0.4
2007	JAS	-0.76	-1	-1.2	-1.2	-1.4	-1.3	-0.7	-0.2
2007	ASO	-1.06	-1	-1.1	-1.4	-1.2	-1.4	-1.3	-0.7
2007	SON	-1.31	-1.3	-1.1	-0.9	-1.1	-0.9	-1.1	-1
2007	OND	-1.45	-1.8	-1.3	-1	-0.8	-0.9	-0.8	-0.9
2007	NDJ	-1.57	-1.9	-1.7	-1.3	-1	-0.7	-0.8	-0.8
2007	DJF	-1.63	-1.9	-2.1	-1.7	-1.2	-1	-0.7	-0.7
2008	JFM	-1.5	-2	-2.3	-2.2	-1.7	-1.1	-1	-0.7
2008	FMA	-1.23	-1.5	-2	-2.5	-2.1	-1.5	-0.9	-0.8
2008	MAM	-0.92	-1.2	-1.3	-1.8	-2.4	-1.9	-1.2	-0.8
2008	AMJ	-0.72	-1.1	-1.2	-1.3	-1.7	-2	-1.6	-1
2008	MJJ	-0.49	-0.3	-0.9	-1.1	-1.2	-1.5	-1.7	-1.4
2008	JJA	-0.28	0.2	0.2	-0.8	-0.9	-1.2	-1.4	-1.5
2008	JAS	-0.19	0.2	0.5	0.5	-0.7	-0.8	-1.2	-1.3
2008	ASO	-0.23	0	0.3	0.5	0.6	-0.6	-0.8	-1.2
2008	SON	-0.32	-0.3	-0.2	0.2	0.4	0.5	-0.6	-0.8
2008	OND	-0.5	-0.6	-0.4	-0.3	0.1	0.3	0.5	-0.5
2008	NDJ	-0.7	-0.6	-0.7	-0.5	-0.3	0	0.1	0.5
2008	DJF	-0.83	-1.4	-1	-0.8	-0.7	-0.5	-0.2	-0.1
	JFM	-0.77	-0.7	-1.6	-1.2	-0.8	-0.7	-0.5	-0.3
	FMA	-0.56	-0.3	-0.5	-1.6	-1.2	-0.6	-0.6	-0.5
	MAM	-0.24	-0.3	-0.1	-0.4	-1.4	-1.1	-0.5	-0.4
	AMJ	0.13	0	-0.2	0.1	-0.3	-1.2	-1	-0.4



2009	MJJ	0.41	0.5	0.2	0	0.4	-0.2	-0.9	-0.7
2009	JJA	0.54	1.1	0.7	0.4	0.2	0.6	-0.1	-0.7
2009	JAS	0.62	1.1	1.3	0.8	0.4	0.3	0.7	0
2009	ASO	0.73	1.1	1.3	1.5	1.1	0.5	0.3	0.8
2009	SON	1.04	1.2	1.3	1.6	1.6	1.3	0.6	0.4
2009	OND	1.41	1.4	1.4	1.5	1.9	1.9	1.5	0.8
2009	NDJ	1.61	1.5	1.4	1.6	1.7	2	2.1	1.5
2009	DJF	1.52	1.6	1.3	1.2	1.5	1.6	1.9	2
2010	JFM	1.24	1.3	1.3	1.2	1	1.3	1.4	1.7
2010	FMA	0.9	1.2	1.1	1.1	1.1	0.9	1.1	1.2
2010	MAM	0.45	0.8	1	1	0.9	1	0.8	1
2010	AMJ	-0.05	0.4	0.4	0.8	0.9	0.8	0.8	0.8
2010	MJJ	-0.53	-0.4	0.1	0.2	0.7	0.9	0.8	0.9
2010	JJA	-0.96	-1	-0.6	-0.2	0	0.5	0.9	0.8
2010	JAS	-1.31	-0.9	-1	-0.6	-0.3	-0.1	0.4	0.8
2010	ASO	-1.54	-1	-1.1	-1	-0.6	-0.4	-0.1	0.3
2010	SON	-1.61	-1.6	-1.4	-1.3	-1.1	-0.8	-0.5	-0.2
2010	OND	-1.59	-1.8	-1.9	-1.7	-1.6	-1.3	-1.1	-0.6
2010	NDJ	-1.56	-1.6	-1.7	-1.9	-1.8	-1.7	-1.4	-1.2
2010	DJF	-1.41	-1.6	-1.5	-1.5	-1.7	-1.6	-1.6	-1.3
2011	JFM	-1.18	-1.2	-1.4	-1.4	-1.2	-1.4	-1.3	-1.3
2011	FMA	-0.88	-0.7	-0.8	-1.1	-1.1	-0.9	-1.1	-1
2011	MAM	-0.65	-0.6	-0.5	-0.7	-1.1	-1.1	-0.8	-1
2011	AMJ	-0.43	-0.4	-0.5	-0.4	-0.8	-1.2	-1.2	-0.9
2011	MJJ	-0.32	0.1	-0.2	-0.3	-0.3	-0.8	-1.3	-1.2
2011	JJA	-0.39	0.1	0.3	-0.1	-0.3	-0.3	-0.8	-1.3
2011	JAS	-0.58	-0.2	0.1	0.4	0	-0.3	-0.3	-0.8
2011	ASO	-0.81	-0.5	-0.3	0	0.5	0	-0.4	-0.5
2011	SON	-0.98	-1	-0.5	-0.5	-0.1	0.5	-0.1	-0.5
2011	OND	-1.05	-1.3	-1.3	-0.8	-0.7	-0.3	0.5	-0.2
2011	NDJ	-1	-1.1	-1.5	-1.3	-0.9	-0.8	-0.4	0.5
2011	DJF	-0.85	-1.2	-1.2	-1.5	-1.3	-1	-0.9	-0.4
2012	JFM	-0.7	-0.9	-1	-1.1	-1.4	-1.1	-0.9	-0.8
2012	FMA	-0.54	-0.6	-0.8	-0.9	-0.9	-1.2	-1	-0.7
2012	MAM	-0.38	-0.5	-0.4	-0.6	-0.8	-0.8	-1.2	-0.9
2012	AMJ	-0.14	-0.1	-0.2	-0.3	-0.5	-0.8	-0.8	-1.2
	MJJ	0.11	0	0.2	0	-0.1	-0.5	-0.8	-0.8
	JJA	0.34	0.4	0.2	0.3	0.2	0.2	-0.4	-0.8
	JAS	0.41	0.7	0.4	0.3	0.4	0.2	0.3	-0.3
	ASO	0.39	0.7	0.9	0.6	0.5	0.5	0.2	0.4



2012	SON	0.3	0.7	0.9	1	0.7	0.6	0.5	0.1
2012	OND	0.11	0.7	0.6	1	1.1	0.9	0.6	0.5
2012	NDJ	-0.18	0	0.6	0.6	1.1	1.1	0.8	0.7
2012	DJF	-0.42	-0.5	-0.4	0.6	0.5	1.1	0.9	0.7
2013	JFM	-0.42	-0.6	-0.7	-0.5	0.5	0.4	0.9	0.7
2013	FMA	-0.28	-0.1	-0.4	-0.6	-0.4	0.4	0.3	0.7
2013	MAM	-0.21	0	-0.1	-0.3	-0.5	-0.1	0.3	0.3
2013	AMJ	-0.23	0.4	0	-0.1	-0.1	-0.3	0.1	0.3
2013	MJJ	-0.28	0.1	0.2	-0.1	-0.1	0	-0.1	0.4
2013	JJA	-0.31	0	0.2	0.1	-0.1	0	0.2	0.2
2013	JAS	-0.27	0	0.2	0.2	0.1	-0.2	0	0.3
2013	ASO	-0.24	-0.1	0.1	0.3	0.2	0.1	-0.1	0.1
2013	SON	-0.14	0.2	0.2	0.1	0.4	0.2	0.2	-0.1
2013	OND	-0.12	0.2	0.3	0.2	0.1	0.5	0.1	0.2
2013	NDJ	-0.23	0.1	0.3	0.3	0.2	-0.1	0.3	0
2013	DJF	-0.41	-0.2	0	0.4	0.3	0.1	-0.3	0.2
2014	JFM	-0.45	-0.1	-0.2	-0.1	0.4	0.3	0.2	-0.3
2014	FMA	-0.21	-0.1	0.2	0	0	0.5	0.3	0.3
2014	MAM	0.13	0.1	0.2	0.4	0.2	0.2	0.5	0.4
2014	AMJ	0.33	0.7	0.5	0.4	0.5	0.4	0.3	0.6
2014	MJJ	0.29	0.6	1	0.7	0.5	0.7	0.6	0.4
2014	JJA	0.14	0.4	0.7	1.1	0.8	0.6	0.8	0.8
2014	JAS	0.11	0.5	0.5	0.8	1.1	0.8	0.6	0.9
2014	ASO	0.25	0.5	0.7	0.7	1	1.3	0.9	0.7
2014	SON	0.53	0.6	0.9	1	0.9	1.2	1.5	1.1
2014	OND	0.69	0.5	0.8	1.1	1.1	0.9	1.3	1.5
2014	NDJ	0.69	0.8	0.6	0.8	1.1	1	0.9	1.2
2014	DJF	0.56	0.5	0.6	0.6	0.8	1	0.9	0.8
2015	JFM	0.48	0.4	0.4	0.6	0.6	0.8	0.9	0.8
2015	FMA	0.58	0.7	0.5	0.4	0.7	0.7	0.8	0.9
2015	MAM	0.79	0.7	0.7	0.6	0.5	0.8	0.8	0.9
2015	AMJ	1.05	1	0.9	0.9	0.8	0.7	1	0.9
2015	MJJ	1.31	1.5	1.4	1.1	1	1	1	1.3
2015	JJA	1.61	1.6	1.9	1.7	1.2	1.1	1.4	1.3
2015	JAS	1.91	2	1.8	2.2	1.8	1.2	1.1	1.6
2015	ASO	2.19	2.1	2.5	2	2.4	2	1.3	1.2
	SON	2.47	2.2	2.5	2.9	2.3	2.7	2.2	1.4
	OND	2.63	2.3	2.3	2.7	3	2.4	2.7	2.2
	NDJ	2.69	2.5	2.2	2.1	2.4	2.7	2.3	2.4
	DJF	2.51	2.7	2.2	1.9	1.8	2	2.2	1.9



2016	JFM	2.16	2.3	2.4	1.9	1.6	1.4	1.6	1.7
2016	FMA	1.65	1.6	1.9	2.1	1.7	1.3	1.2	1.3
2016	MAM	1.03	1.5	1.4	1.5	1.9	1.5	0.9	1
2016	AMJ	0.51	0.6	1.2	1.1	1.2	1.6	1.2	0.6
2016	MJJ	0.05	-0.3	-0.2	1.1	0.9	0.8	1.3	0.9
2016	JJA	-0.27	-0.5	-0.9	-0.9	1	0.7	0.4	0.9
2016	JAS	-0.5	-0.3	-0.8	-1.1	-1.2	1	0.6	0.2
2016	ASO	-0.61	-0.5	-0.6	-1	-1.2	-1.4	1	0.4
2016	SON	-0.65	-0.6	-0.4	-0.7	-1	-1.2	-1.6	1.1
2016	OND	-0.61	-0.9	-0.6	-0.4	-0.8	-1.1	-1.3	-1.8
2016	NDJ	-0.53	-0.6	-1	-0.7	-0.6	-0.9	-1.2	-1.4
2016	DJF	-0.32	-0.5	-0.6	-1	-0.6	-0.6	-0.8	-1.2
2017	JFM	-0.14	-0.1	-0.5	-0.6	-0.7	-0.3	-0.5	-0.6
2017	FMA	0.11	0.1	0.1	-0.5	-0.4	-0.3	0	-0.2
2017	MAM	0.3	0.3	0.5	0.2	-0.4	-0.1	-0.1	0.2
2017	AMJ	0.43	0.5	0.6	0.7	0.3	-0.3	0.1	0.2
2017	MJJ	0.44	0.5	0.8	0.7	0.9	0.3	-0.3	0.2
2017	JJA	0.23	0.6	0.5	0.8	0.8	1	0.3	-0.1
2017	JAS	-0.07	0.4	0.6	0.4	0.8	0.7	1.1	0.2
2017	ASO	-0.36	0.1	0.3	0.4	0.4	0.7	0.7	1.1
2017	SON	-0.62	-0.6	-0.1	0.2	0.4	0.3	0.8	0.8
2017	OND	-0.79	-0.7	-1	-0.3	0.1	0.4	0.3	0.9
2017	NDJ	-0.94	-1	-0.9	-1.2	-0.4	0	0.2	0.3
2017	DJF	-0.9	-1	-1.2	-1.3	-1.5	-0.6	-0.3	0
2018	JFM	-0.83	-0.9	-1	-1.2	-1.4	-1.6	-0.7	-0.3
2018	FMA	-0.64	-0.8	-0.8	-0.9	-0.9	-1.2	-1.4	-0.5
2018	MAM	-0.41	-0.8	-0.7	-0.7	-0.7	-0.6	-0.8	-1
2018	AMJ	-0.1	-0.3	-0.7	-0.7	-0.7	-0.6	-0.4	-0.5
2018	MJJ	0.12	-0.1	-0.1	-0.6	-0.7	-0.7	-0.4	-0.2
2018	JJA	0.18	0.3	0	0	-0.7	-0.7	-0.7	-0.2
2018	JAS	0.22	0.6	0.5	0.1	0	-0.8	-0.6	-0.7

## 2. Data KNU

TAHUN	MUSIM	Data (°C)							
		OBS	LEAD 1	LEAD 2	LEAD 3	LEAD 4	LEAD 5	LEAD 6	LEAD 7
	ASO	0.55	0.8	0.9	1	0.7	0.7	0.4	0
	SON	0.8	1	1	1	1.1	0.8	0.8	0.4
	OND	0.99	0.9	1.1	1	1	1.1	0.8	0.8
	NDJ	0.98	0.9	0.9	1.1	0.9	0.9	1	0.8





2006	DJF	0.67	0.9	0.9	0.9	1	0.9	0.9	0.9
2007	JFM	0.23	1	0.9	0.9	0.9	0.9	0.8	0.8
2007	FMA	-0.07	0.6	0.9	0.9	0.9	0.8	0.9	0.8
2007	MAM	-0.23	0.1	0.6	0.8	0.8	0.9	0.8	0.8
2007	AMJ	-0.26	-0.3	0.1	0.5	0.8	0.8	0.8	0.7
2007	MJJ	-0.35	-0.4	-0.3	0.1	0.5	0.7	0.7	0.7
2007	JJA	-0.46	-0.4	-0.4	-0.2	0.1	0.4	0.6	0.6
2007	JAS	-0.76	-0.4	-0.4	-0.3	-0.2	0.1	0.3	0.5
2007	ASO	-1.06	-0.3	-0.4	-0.4	-0.2	-0.2	0.1	0.2
2007	SON	-1.31	-0.5	-0.3	-0.4	-0.3	-0.2	-0.1	0
2007	OND	-1.45	-0.8	-0.5	-0.3	-0.4	-0.3	-0.1	-0.1
2007	NDJ	-1.57	-1.1	-0.8	-0.4	-0.2	-0.3	-0.3	-0.1
2007	DJF	-1.63	-1.3	-1.1	-0.8	-0.4	-0.2	-0.3	-0.3
2008	JFM	-1.5	-1.2	-1.2	-1	-0.7	-0.3	-0.2	-0.3
2008	FMA	-1.23	-1.1	-1	-1	-0.8	-0.7	-0.3	-0.1
2008	MAM	-0.92	-1	-0.9	-0.9	-0.9	-0.7	-0.5	-0.2
2008	AMJ	-0.72	-0.6	-0.7	-0.6	-0.7	-0.7	-0.5	-0.4
2008	MJJ	-0.49	-0.4	-0.3	-0.4	-0.4	-0.5	-0.5	-0.4
2008	JJA	-0.28	0	0	0	-0.2	-0.2	-0.3	-0.3
2008	JAS	-0.19	0.1	0.3	0.3	0.2	0	0	-0.1
2008	ASO	-0.23	0.1	0.4	0.6	0.4	0.3	0.1	0.1
2008	SON	-0.32	0.2	0.3	0.6	0.7	0.5	0.4	0.2
2008	OND	-0.5	0	0.4	0.5	0.7	0.8	0.6	0.5
2008	NDJ	-0.7	-0.2	0.1	0.6	0.6	0.7	0.8	0.7
2008	DJF	-0.83	-0.4	0	0.3	0.6	0.6	0.8	0.9
2009	JFM	-0.77	-0.6	-0.3	0.1	0.4	0.7	0.7	0.8
2009	FMA	-0.56	-0.5	-0.4	-0.2	0.2	0.4	0.7	0.7
2009	MAM	-0.24	-0.5	-0.3	-0.3	-0.1	0.2	0.4	0.7
2009	AMJ	0.13	-0.2	-0.2	-0.1	-0.2	-0.1	0.2	0.4
2009	MJJ	0.41	0.1	0	0	0	-0.1	0	0.2
2009	JJA	0.54	0.3	0.3	0.2	0.1	0.1	-0.1	0
2009	JAS	0.62	0.8	0.5	0.5	0.3	0.2	0.2	-0.1
2009	ASO	0.73	1	1	0.7	0.7	0.4	0.3	0.2
2009	SON	1.04	1.1	1.2	1.2	0.9	0.8	0.5	0.4
2009	OND	1.41	0.8	1.1	1.2	1.2	0.9	0.8	0.6
2009	NDJ	1.61	0.8	0.8	1.1	1.2	1.2	0.9	0.8
2009	DJF	1.52	1.2	0.9	0.8	1.1	1.1	1.1	0.9
2010	JFM	1.24	1.3	1.1	0.8	0.8	1.1	1.1	1.1
	FMA	0.9	1.1	1.2	1.1	0.8	0.8	1	1
	MAM	0.45	0.8	1	1.1	1	0.8	0.8	0.9
	AMJ	-0.05	0.4	0.7	0.9	1	0.9	0.7	0.7
	MJJ	-0.53	0.2	0.3	0.6	0.8	0.9	0.8	0.6



2010	JJA	-0.96	-0.7	0	0.2	0.5	0.7	0.8	0.7
2010	JAS	-1.31	-1.1	-0.8	0	0.1	0.4	0.6	0.7
2010	ASO	-1.54	-1	-1.1	-0.7	-0.1	0	0.3	0.6
2010	SON	-1.61	-0.8	-0.9	-0.9	-0.6	-0.1	0	0.3
2010	OND	-1.59	-1.2	-0.7	-0.7	-0.7	-0.5	0	0
2010	NDJ	-1.56	-1.2	-1	-0.5	-0.6	-0.6	-0.4	-0.1
2010	DJF	-1.41	-1.1	-1	-0.8	-0.4	-0.5	-0.5	-0.3
2011	JFM	-1.18	-1.2	-1	-0.9	-0.7	-0.4	-0.4	-0.5
2011	FMA	-0.88	-1.2	-1.1	-1	-0.9	-0.6	-0.4	-0.5
2011	MAM	-0.65	-1	-1.1	-1.1	-0.9	-0.8	-0.6	-0.4
2011	AMJ	-0.43	-0.7	-0.8	-1	-0.9	-0.8	-0.7	-0.6
2011	MJJ	-0.32	-0.4	-0.5	-0.6	-0.7	-0.7	-0.6	-0.6
2011	JJA	-0.39	-0.1	-0.1	-0.2	-0.3	-0.5	-0.5	-0.4
2011	JAS	-0.58	0.1	0.3	0.2	0	-0.1	-0.3	-0.3
2011	ASO	-0.81	-0.1	0.3	0.5	0.4	0.2	0.1	-0.1
2011	SON	-0.98	-0.3	0.1	0.5	0.6	0.5	0.3	0.2
2011	OND	-1.05	-0.4	-0.1	0.3	0.6	0.7	0.6	0.4
2011	NDJ	-1	-0.6	-0.3	0.1	0.3	0.6	0.8	0.6
2011	DJF	-0.85	-0.6	-0.4	-0.1	0.2	0.4	0.7	0.8
2012	JFM	-0.7	-0.5	-0.4	-0.3	0	0.3	0.5	0.7
2012	FMA	-0.54	-0.3	-0.4	-0.2	-0.1	0.1	0.3	0.5
2012	MAM	-0.38	-0.3	-0.2	-0.3	-0.1	0	0.2	0.4
2012	AMJ	-0.14	-0.2	-0.1	-0.1	-0.2	-0.1	0.1	0.2
2012	MJJ	0.11	0.1	0.1	0.2	0.1	-0.1	0	0.1
2012	JJA	0.34	0.4	0.5	0.4	0.4	0.2	0	0.1
2012	JAS	0.41	0.8	0.6	0.7	0.6	0.4	0.3	0.1
2012	ASO	0.39	0.8	1	0.8	0.9	0.6	0.5	0.4
2012	SON	0.3	0.8	1	1.2	1	1	0.7	0.6
2012	OND	0.11	0.8	0.9	1.2	1.3	1	1.1	0.8
2012	NDJ	-0.18	0.3	0.9	1	1.3	1.3	1.1	1.1
2012	DJF	-0.42	0.1	0.3	1	1	1.3	1.2	1
2013	JFM	-0.42	-0.2	0.1	0.3	1	1	1.2	1.2
2013	FMA	-0.28	-0.4	-0.2	0.1	0.4	1	1	1.2
2013	MAM	-0.21	-0.4	-0.3	-0.1	0.2	0.4	1	0.9
2013	AMJ	-0.23	-0.4	-0.3	-0.3	-0.1	0.2	0.4	0.9
2013	MJJ	-0.28	-0.3	-0.1	-0.1	-0.1	0	0.2	0.3
2013	JJA	-0.31	-0.2	-0.1	0.1	0	-0.1	0	0.1
2013	JAS	-0.27	0.1	0	0.2	0.3	0.2	0.1	0
	ASO	-0.24	0	0.1	0.1	0.2	0.4	0.2	0.1
	SON	-0.14	-0.1	0	0.2	0.1	0.2	0.4	0.2
	OND	-0.12	-0.1	0	0.1	0.2	0.2	0.3	0.4
	NDJ	-0.23	0.2	0.1	0.1	0.2	0.3	0.3	0.3



2013	DJF	-0.41	0.4	0.4	0.2	0.3	0.3	0.4	0.3
2014	JFM	-0.45	0.2	0.5	0.5	0.3	0.3	0.4	0.4
2014	FMA	-0.21	-0.1	0.3	0.6	0.5	0.3	0.4	0.4
2014	MAM	0.13	0.1	0.1	0.4	0.6	0.5	0.4	0.4
2014	AMJ	0.33	0.4	0.2	0.2	0.4	0.6	0.5	0.4
2014	MJJ	0.29	0.5	0.5	0.3	0.3	0.4	0.5	0.5
2014	JJA	0.14	0.8	0.7	0.6	0.5	0.3	0.4	0.5
2014	JAS	0.11	0.8	1	0.8	0.8	0.6	0.4	0.4
2014	ASO	0.25	0.7	1.1	1.2	1	0.9	0.7	0.5
2014	SON	0.53	0.8	0.9	1.2	1.2	1	1	0.8
2014	OND	0.69	0.6	0.9	0.9	1.2	1.2	1	0.9
2014	NDJ	0.69	0.6	0.7	0.9	1	1.1	1.1	0.9
2014	DJF	0.56	0.8	0.7	0.7	1	1	1.1	1.1
2015	JFM	0.48	0.7	0.8	0.8	0.8	1	1	1.1
2015	FMA	0.58	0.5	0.7	0.8	0.7	0.8	0.9	0.9
2015	MAM	0.79	0.5	0.5	0.6	0.8	0.7	0.7	0.9
2015	AMJ	1.05	0.5	0.5	0.5	0.6	0.8	0.7	0.7
2015	MJJ	1.31	0.8	0.5	0.5	0.5	0.6	0.7	0.6
2015	JJA	1.61	1.1	0.8	0.5	0.5	0.4	0.5	0.7
2015	JAS	1.91	1.4	1.2	0.9	0.5	0.5	0.4	0.5
2015	ASO	2.19	1.8	1.5	1.3	1	0.6	0.5	0.4
2015	SON	2.47	1.9	1.8	1.6	1.3	1	0.7	0.5
2015	OND	2.63	1.8	1.8	1.7	1.5	1.3	1	0.6
2015	NDJ	2.69	1.7	1.7	1.7	1.6	1.4	1.2	0.9
2015	DJF	2.51	1.7	1.6	1.5	1.5	1.4	1.3	1.1
2016	JFM	2.16	1.7	1.5	1.5	1.4	1.4	1.3	1.1
2016	FMA	1.65	1.6	1.5	1.4	1.3	1.3	1.2	1.1
2016	MAM	1.03	1.3	1.3	1.3	1.2	1.2	1.1	1
2016	AMJ	0.51	1	1	1.1	1.1	1	1	0.9
2016	MJJ	0.05	0.5	0.7	0.8	0.8	0.8	0.8	0.7
2016	JJA	-0.27	-0.2	0.2	0.4	0.5	0.6	0.6	0.5
2016	JAS	-0.5	-0.7	-0.5	-0.1	0.2	0.2	0.3	0.3
2016	ASO	-0.61	-0.8	-0.8	-0.7	-0.3	-0.1	0	0
2016	SON	-0.65	-0.8	-0.9	-0.9	-0.8	-0.5	-0.3	-0.3
2016	OND	-0.61	-0.6	-0.8	-0.9	-1	-1	-0.6	-0.6
2016	NDJ	-0.53	-0.5	-0.6	-0.7	-0.9	-1.1	-1.1	-0.8
2016	DJF	-0.32	-0.2	-0.4	-0.6	-0.7	-0.9	-1.1	-1.2
2017	JFM	-0.14	-0.2	-0.2	-0.4	-0.6	-0.7	-0.9	-1.2
	FMA	0.11	-0.3	-0.2	-0.2	-0.5	-0.6	-0.8	-1
	MAM	0.3	0	-0.3	-0.2	-0.3	-0.5	-0.7	-0.9
	AMJ	0.43	0.1	0	-0.3	-0.2	-0.3	-0.5	-0.7
	MJJ	0.44	0.3	0.2	0.1	-0.2	-0.2	-0.3	-0.6



2017	JJA	0.23	0.5	0.5	0.4	0.3	-0.1	-0.1	-0.3
2017	JAS	-0.07	0.5	0.6	0.7	0.6	0.5	0.1	0
2017	ASO	-0.36	0.2	0.6	0.8	0.8	0.7	0.6	0.2
2017	SON	-0.62	-0.3	0.3	0.7	0.9	0.9	0.8	0.6
2017	OND	-0.79	-0.5	-0.2	0.3	0.7	0.9	0.9	0.8
2017	NDJ	-0.94	-0.5	-0.4	-0.1	0.4	0.7	0.8	0.8
2017	DJF	-0.9	-0.5	-0.4	-0.3	-0.1	0.3	0.6	0.7
2018	JFM	-0.83	-0.5	-0.5	-0.4	-0.3	-0.1	0.3	0.6
2018	FMA	-0.64	-0.6	-0.5	-0.4	-0.3	-0.2	-0.1	0.3
2018	MAM	-0.41	-0.6	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1
2018	AMJ	-0.1	-0.5	-0.4	-0.4	-0.4	-0.3	-0.2	-0.2
2018	MJJ	0.12	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2
2018	JJA	0.18	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
2018	JAS	0.22	0.6	0.3	0.2	0	0	-0.1	-0.1

### 3. Data AVEDyn

TAHUN	MUSIM	Data (°C)							
		OBS	LEAD 1	LEAD 2	LEAD 3	LEAD 4	LEAD 5	LEAD 6	LEAD 7
2006	ASO	0.55	0.4	0.4	0.4	0.2	0.2	0.2	0.4
2006	SON	0.8	0.7	0.5	0.5	0.4	0.2	0.3	0.2
2006	OND	0.99	0.9	0.8	0.5	0.5	0.5	0.2	0.4
2006	NDJ	0.98	1	1	0.8	0.5	0.5	0.5	0.3
2006	DJF	0.67	1.1	1	1	0.9	0.5	0.5	0.5
2007	JFM	0.23	0.8	0.9	0.9	0.9	0.8	0.5	0.4
2007	FMA	-0.07	0.3	0.6	0.8	0.8	0.8	0.8	0.4
2007	MAM	-0.23	-0.1	0.2	0.4	0.7	0.7	0.8	0.7
2007	AMJ	-0.26	-0.5	-0.2	0.1	0.3	0.6	0.7	0.7
2007	MJJ	-0.35	-0.5	-0.6	-0.2	0	0.2	0.5	0.6
2007	JJA	-0.46	-0.7	-0.7	-0.7	-0.4	0	0.2	0.4
2007	JAS	-0.76	-0.8	-0.9	-0.8	-0.8	-0.4	0	0.1
2007	ASO	-1.06	-0.8	-0.9	-1	-0.7	-0.8	-0.4	0
2007	SON	-1.31	-0.9	-0.8	-0.9	-0.9	-0.7	-0.7	-0.3
2007	OND	-1.45	-1.2	-0.9	-0.7	-0.7	-0.9	-0.8	-0.7
2007	NDJ	-1.57	-1.4	-1.2	-0.8	-0.6	-0.6	-0.8	-0.7
2007	DJF	-1.63	-1.6	-1.4	-1.1	-0.7	-0.5	-0.5	-0.7
2008	JFM	-1.5	-1.4	-1.5	-1.2	-0.9	-0.6	-0.3	-0.5
	FMA	-1.23	-1.4	-1.3	-1.3	-0.9	-0.8	-0.5	-0.2
	MAM	-0.92	-1.1	-1.2	-1.1	-1	-0.7	-0.6	-0.4
	AMJ	-0.72	-0.8	-1	-1	-0.9	-0.9	-0.5	-0.4
	MJJ	-0.49	-0.5	-0.6	-0.8	-0.8	-0.7	-0.7	-0.3



2008	JJA	-0.28	-0.2	-0.3	-0.4	-0.6	-0.7	-0.6	-0.6
2008	JAS	-0.19	0.1	0	-0.1	-0.3	-0.6	-0.6	-0.5
2008	ASO	-0.23	0.2	0.2	0.1	0	-0.2	-0.5	-0.6
2008	SON	-0.32	0.2	0.3	0.3	0.1	0	-0.1	-0.5
2008	OND	-0.5	-0.3	0.3	0.2	0.3	0.1	0.1	-0.1
2008	NDJ	-0.7	-0.3	-0.3	0.3	0.3	0.2	0.2	0.1
2008	DJF	-0.83	-0.5	-0.3	-0.2	0.3	0.2	0.3	0.1
2009	JFM	-0.77	-0.6	-0.5	-0.2	-0.1	0.3	0.2	0.2
2009	FMA	-0.56	-0.5	-0.5	-0.4	-0.2	0	0.3	0.1
2009	MAM	-0.24	-0.4	-0.3	-0.3	-0.2	-0.1	0.1	0.2
2009	AMJ	0.13	-0.2	-0.1	-0.1	-0.1	-0.1	0	0.1
2009	MJJ	0.41	0.2	0	0.1	0.1	0	0	0.1
2009	JJA	0.54	0.6	0.4	0.2	0.3	0.2	0.2	0
2009	JAS	0.62	1	0.8	0.6	0.4	0.4	0.3	0.2
2009	ASO	0.73	1.1	1.2	0.9	0.7	0.4	0.6	0.3
2009	SON	1.04	1.2	1.3	1.3	1.1	0.8	0.6	0.6
2009	OND	1.41	1.2	1.3	1.3	1.4	1.1	1	0.6
2009	NDJ	1.61	1.3	1.3	1.3	1.4	1.5	1.2	1
2009	DJF	1.52	1.5	1.2	1.2	1.3	1.3	1.4	1.1
2010	JFM	1.24	1.4	1.3	1.1	1.2	1.2	1.1	1.2
2010	FMA	0.9	1.1	1.2	1.1	1	1	1	0.9
2010	MAM	0.45	0.7	0.8	0.9	0.9	0.9	0.9	0.8
2010	AMJ	-0.05	0.3	0.5	0.6	0.7	0.7	0.7	0.8
2010	MJJ	-0.53	-0.1	-0.1	0.2	0.4	0.5	0.5	0.5
2010	JJA	-0.96	-0.8	-0.4	-0.3	0	0.2	0.4	0.3
2010	JAS	-1.31	-1.2	-1	-0.5	-0.5	-0.1	0.1	0.2
2010	ASO	-1.54	-1.3	-1.2	-1	-0.6	-0.5	-0.2	-0.1
2010	SON	-1.61	-1.5	-1.4	-1.2	-1	-0.6	-0.5	-0.2
2010	OND	-1.59	-1.8	-1.6	-1.4	-1.1	-1	-0.7	-0.6
2010	NDJ	-1.56	-1.7	-1.7	-1.5	-1.4	-1.1	-1.1	-0.7
2010	DJF	-1.41	-1.5	-1.6	-1.6	-1.4	-1.2	-0.9	-1
2011	JFM	-1.18	-1.3	-1.3	-1.4	-1.3	-1.1	-1.1	-0.7
2011	FMA	-0.88	-1	-1	-1.1	-1.1	-1.1	-0.9	-0.9
2011	MAM	-0.65	-0.7	-0.7	-0.8	-0.9	-0.9	-1	-0.7
2011	AMJ	-0.43	-0.4	-0.4	-0.5	-0.6	-0.6	-0.8	-0.9
2011	MJJ	-0.32	-0.2	-0.2	-0.2	-0.2	-0.4	-0.5	-0.6
2011	JJA	-0.39	0	0	0.1	0	0	-0.4	-0.3
2011	JAS	-0.58	0	0.1	0.2	0.2	0.1	-0.1	-0.3
	ASO	-0.81	-0.2	0	0.1	0.2	0.3	0	-0.1
	SON	-0.98	-0.5	-0.2	0	0.1	0.3	0.3	-0.1
	OND	-1.05	-0.7	-0.5	-0.2	-0.1	0.1	0.4	0.3
	NDJ	-1	-0.9	-0.7	-0.5	-0.3	-0.1	0.1	0.2



2011	DJF	-0.85	-0.9	-0.9	-0.7	-0.4	-0.2	-0.1	0
2012	JFM	-0.7	-0.9	-0.7	-0.7	-0.6	-0.3	-0.2	-0.2
2012	FMA	-0.54	-0.6	-0.7	-0.5	-0.5	-0.4	-0.2	-0.2
2012	MAM	-0.38	-0.3	-0.3	-0.5	-0.3	-0.3	-0.4	-0.2
2012	AMJ	-0.14	-0.1	-0.1	-0.1	-0.3	-0.1	-0.2	-0.4
2012	MJJ	0.11	0.2	0.2	0.2	0.1	-0.1	-0.1	-0.1
2012	JJA	0.34	0.4	0.4	0.4	0.3	0.3	0	0
2012	JAS	0.41	0.7	0.6	0.6	0.6	0.4	0.3	0.1
2012	ASO	0.39	0.7	0.9	0.7	0.7	0.6	0.4	0.3
2012	SON	0.3	0.8	0.9	1	0.8	0.8	0.6	0.3
2012	OND	0.11	0.8	0.8	1	1.1	0.9	0.8	0.7
2012	NDJ	-0.18	0.4	0.8	0.8	1.1	1	0.8	0.8
2012	DJF	-0.42	0.2	0.4	0.8	0.8	1	0.9	0.8
2013	JFM	-0.42	-0.1	0.1	0.3	0.8	0.7	0.9	0.8
2013	FMA	-0.28	-0.3	-0.1	0.1	0.3	0.7	0.6	0.8
2013	MAM	-0.21	-0.2	-0.3	-0.1	0.1	0.3	0.6	0.4
2013	AMJ	-0.23	-0.1	-0.2	-0.2	0	0.1	0.4	0.4
2013	MJJ	-0.28	-0.2	-0.1	0	-0.1	0.1	0.1	0.3
2013	JJA	-0.31	-0.2	-0.1	0	0.1	0	0.1	0.2
2013	JAS	-0.27	-0.2	-0.2	0	0.1	0.1	0.1	0.1
2013	ASO	-0.24	-0.1	-0.2	-0.1	0	0.1	0.1	0.1
2013	SON	-0.14	0	-0.1	-0.2	0	0.1	0.1	0.1
2013	OND	-0.12	-0.1	0	0	-0.1	0	0.1	0.1
2013	NDJ	-0.23	0	-0.1	0.1	0	0	0.1	0.2
2013	DJF	-0.41	0	0	0	0.1	0.1	0.1	0.1
2014	JFM	-0.45	-0.1	0	0.1	0.1	0.2	0.2	0.1
2014	FMA	-0.21	-0.1	0	0.1	0.2	0.2	0.3	0.3
2014	MAM	0.13	-0.1	0	0.2	0.2	0.3	0.2	0.3
2014	AMJ	0.33	0.4	0.2	0.2	0.3	0.3	0.4	0.3
2014	MJJ	0.29	0.6	0.6	0.4	0.4	0.5	0.4	0.4
2014	JJA	0.14	0.6	0.7	0.8	0.6	0.5	0.5	0.5
2014	JAS	0.11	0.5	0.7	0.8	1	0.7	0.5	0.5
2014	ASO	0.25	0.5	0.7	0.8	0.9	1.1	0.7	0.5
2014	SON	0.53	0.6	0.6	0.8	0.9	0.9	1.1	0.8
2014	OND	0.69	0.6	0.7	0.7	0.8	0.9	0.9	1.2
2014	NDJ	0.69	0.8	0.6	0.7	0.7	0.9	0.9	0.9
2014	DJF	0.56	0.8	0.8	0.7	0.8	0.8	0.9	0.9
2015	JFM	0.48	0.6	0.8	0.8	0.7	0.8	0.8	0.8
	FMA	0.58	0.5	0.6	0.8	0.8	0.7	0.8	0.7
	MAM	0.79	0.6	0.6	0.6	0.7	0.8	0.7	0.8
	AMJ	1.05	0.8	0.8	0.7	0.6	0.7	0.8	0.7
	MJJ	1.31	1.2	1	1	0.8	0.7	0.8	0.8



2015	JJA	1.61	1.5	1.4	1.2	1.1	1	0.7	0.8
2015	JAS	1.91	1.8	1.6	1.5	1.3	1.2	0.9	0.7
2015	ASO	2.19	2.2	2	1.6	1.6	1.4	1.1	0.9
2015	SON	2.47	2.4	2.4	2.1	1.7	1.7	1.3	1.1
2015	OND	2.63	2.5	2.5	2.5	2.2	1.8	1.6	1.3
2015	NDJ	2.69	2.6	2.5	2.5	2.5	2.1	1.6	1.6
2015	DJF	2.51	2.5	2.4	2.3	2.3	2.3	1.9	1.6
2016	JFM	2.16	2.2	2.1	2.1	2.1	2	2	1.7
2016	FMA	1.65	1.8	1.7	1.7	1.7	1.6	1.8	1.7
2016	MAM	1.03	1.3	1.3	1.2	1.2	1.3	1.3	1.5
2016	AMJ	0.51	0.6	0.8	0.8	0.7	0.7	0.9	0.8
2016	MJJ	0.05	-0.4	0	0.3	0.2	0.1	0.3	0.5
2016	JJA	-0.27	-0.5	-0.8	-0.5	-0.2	-0.2	-0.4	-0.1
2016	JAS	-0.5	-0.5	-0.7	-0.9	-0.7	-0.4	-0.4	-0.7
2016	ASO	-0.61	-0.5	-0.6	-0.7	-0.9	-0.7	-0.4	-0.4
2016	SON	-0.65	-0.5	-0.6	-0.6	-0.8	-0.9	-0.8	-0.4
2016	OND	-0.61	-0.6	-0.5	-0.6	-0.6	-0.8	-1	-0.9
2016	NDJ	-0.53	-0.7	-0.6	-0.5	-0.6	-0.6	-0.9	-1
2016	DJF	-0.32	-0.4	-0.6	-0.5	-0.5	-0.6	-0.7	-0.9
2017	JFM	-0.14	-0.1	-0.2	-0.5	-0.4	-0.5	-0.5	-0.6
2017	FMA	0.11	0.1	0	-0.1	-0.3	-0.2	-0.3	-0.4
2017	MAM	0.3	0.4	0.3	0.1	0	-0.2	-0.1	-0.2
2017	AMJ	0.43	0.5	0.5	0.4	0.2	0.1	-0.1	0
2017	MJJ	0.44	0.5	0.6	0.7	0.5	0.2	0.2	0.1
2017	JJA	0.23	0.3	0.6	0.8	0.8	0.6	0.4	0.3
2017	JAS	-0.07	0.3	0.3	0.7	0.9	0.9	0.7	0.4
2017	ASO	-0.36	-0.1	0.2	0.3	0.7	1	1	0.9
2017	SON	-0.62	-0.5	-0.1	0.2	0.3	0.8	1	1
2017	OND	-0.79	-0.7	-0.6	-0.1	0.2	0.3	0.8	1.1
2017	NDJ	-0.94	-0.8	-0.8	-0.7	-0.1	0.2	0.3	0.8
2017	DJF	-0.9	-0.9	-0.8	-0.8	-0.7	-0.1	0.2	0.3
2018	JFM	-0.83	-0.7	-0.7	-0.7	-0.6	-0.5	0	0.3
2018	FMA	-0.64	-0.5	-0.5	-0.6	-0.5	-0.4	-0.3	0.1
2018	MAM	-0.41	-0.5	-0.3	-0.3	-0.4	-0.3	-0.2	-0.1
2018	AMJ	-0.1	-0.2	-0.3	-0.1	-0.1	-0.2	-0.1	0
2018	MJJ	0.12	0	0	-0.1	0.1	0.1	0	0.1
2018	JJA	0.18	0.3	0.2	0.2	0.1	0.3	0.2	0.2
2018	JAS	0.22	0.5	0.5	0.3	0.3	0.2	0.4	0.3



#### 4. Data AVEDyn Konsensus

TAHUN	MUSIM	Data (°C)							
		OBS	LEAD 1	LEAD 2	LEAD 3	LEAD 4	LEAD 5	LEAD 6	LEAD 7
2006	ASO	0.55	0.65	0.55	0.75	0.45	0.2	0.05	-0.2
2006	SON	0.8	1	0.8	0.65	0.85	0.55	0.3	0.1
2006	OND	0.99	0.95	1.15	0.8	0.7	0.85	0.55	0.35
2006	NDJ	0.98	0.95	1.05	1.25	0.75	0.55	0.75	0.5
2006	DJF	0.67	0.9	1.05	1.15	1.25	0.7	0.5	0.65
2007	JFM	0.23	0.7	0.9	1.1	1.2	1.25	0.6	0.45
2007	FMA	-0.07	0.15	0.55	0.85	1.05	1.1	1.2	0.6
2007	MAM	-0.23	-0.2	0.05	0.5	0.75	0.95	1	1.05
2007	AMJ	-0.26	-0.3	-0.25	0	0.45	0.7	0.8	0.85
2007	MJJ	-0.35	-0.5	-0.45	-0.3	0.05	0.4	0.6	0.75
2007	JJA	-0.46	-0.55	-0.7	-0.65	-0.4	-0.05	0.3	0.5
2007	JAS	-0.76	-0.7	-0.8	-0.75	-0.8	-0.6	-0.2	0.15
2007	ASO	-1.06	-0.65	-0.75	-0.9	-0.7	-0.8	-0.6	-0.25
2007	SON	-1.31	-0.9	-0.7	-0.65	-0.7	-0.55	-0.6	-0.5
2007	OND	-1.45	-1.3	-0.9	-0.65	-0.6	-0.6	-0.45	-0.5
2007	NDJ	-1.57	-1.5	-1.25	-0.85	-0.6	-0.5	-0.55	-0.45
2007	DJF	-1.63	-1.6	-1.6	-1.25	-0.8	-0.6	-0.5	-0.5
2008	JFM	-1.5	-1.6	-1.75	-1.6	-1.2	-0.7	-0.6	-0.5
2008	FMA	-1.23	-1.3	-1.5	-1.75	-1.45	-1.1	-0.6	-0.45
2008	MAM	-0.92	-1.1	-1.1	-1.35	-1.65	-1.3	-0.85	-0.5
2008	AMJ	-0.72	-0.85	-0.95	-0.95	-1.2	-1.35	-1.05	-0.7
2008	MJJ	-0.49	-0.35	-0.6	-0.75	-0.8	-1	-1.1	-0.9
2008	JJA	-0.28	0.1	0.1	-0.4	-0.55	-0.7	-0.85	-0.9
2008	JAS	-0.19	0.15	0.4	0.4	-0.25	-0.4	-0.6	-0.7
2008	ASO	-0.23	0.05	0.35	0.55	0.5	-0.15	-0.35	-0.55
2008	SON	-0.32	-0.05	0.05	0.4	0.55	0.5	-0.1	-0.3
2008	OND	-0.5	-0.3	0	0.1	0.4	0.55	0.55	0
2008	NDJ	-0.7	-0.4	-0.3	0.05	0.15	0.35	0.45	0.6
2008	DJF	-0.83	-0.9	-0.5	-0.25	-0.05	0.05	0.3	0.4
2009	JFM	-0.77	-0.65	-0.95	-0.55	-0.2	0	0.1	0.25
2009	FMA	-0.56	-0.4	-0.45	-0.9	-0.5	-0.1	0.05	0.1
2009	MAM	-0.24	-0.4	-0.2	-0.35	-0.75	-0.45	-0.05	0.15
2009	AMJ	0.13	-0.1	-0.2	0	-0.25	-0.65	-0.4	0
2009	MJJ	0.41	0.3	0.1	0	0.2	-0.15	-0.45	-0.25
	JJA	0.54	0.7	0.5	0.3	0.15	0.35	-0.1	-0.35
	JAS	0.62	0.95	0.9	0.65	0.35	0.25	0.45	-0.05
	ASO	0.73	1.05	1.15	1.1	0.9	0.45	0.3	0.5
	SON	1.04	1.15	1.25	1.4	1.25	1.05	0.55	0.4





2009	OND	1.41	1.1	1.25	1.35	1.55	1.4	1.15	0.7
2009	NDJ	1.61	1.15	1.1	1.35	1.45	1.6	1.5	1.15
2009	DJF	1.52	1.4	1.1	1	1.3	1.35	1.5	1.45
2010	JFM	1.24	1.3	1.2	1	0.9	1.2	1.25	1.4
2010	FMA	0.9	1.15	1.15	1.1	0.95	0.85	1.05	1.1
2010	MAM	0.45	0.8	1	1.05	0.95	0.9	0.8	0.95
2010	AMJ	-0.05	0.4	0.55	0.85	0.95	0.85	0.75	0.75
2010	MJJ	-0.53	-0.1	0.2	0.4	0.75	0.9	0.8	0.75
2010	JJA	-0.96	-0.85	-0.3	0	0.25	0.6	0.85	0.75
2010	JAS	-1.31	-1	-0.9	-0.3	-0.1	0.15	0.5	0.75
2010	ASO	-1.54	-1	-1.1	-0.85	-0.35	-0.2	0.1	0.45
2010	SON	-1.61	-1.2	-1.15	-1.1	-0.85	-0.45	-0.25	0.05
2010	OND	-1.59	-1.5	-1.3	-1.2	-1.15	-0.9	-0.55	-0.3
2010	NDJ	-1.56	-1.4	-1.35	-1.2	-1.2	-1.15	-0.9	-0.65
2010	DJF	-1.41	-1.35	-1.25	-1.15	-1.05	-1.05	-1.05	-0.8
2011	JFM	-1.18	-1.2	-1.2	-1.15	-0.95	-0.9	-0.85	-0.9
2011	FMA	-0.88	-0.95	-0.95	-1.05	-1	-0.75	-0.75	-0.75
2011	MAM	-0.65	-0.8	-0.8	-0.9	-1	-0.95	-0.7	-0.7
2011	AMJ	-0.43	-0.55	-0.65	-0.7	-0.85	-1	-0.95	-0.75
2011	MJJ	-0.32	-0.15	-0.35	-0.45	-0.5	-0.75	-0.95	-0.9
2011	JJA	-0.39	0	0.1	-0.15	-0.3	-0.4	-0.65	-0.85
2011	JAS	-0.58	-0.05	0.2	0.3	0	-0.2	-0.3	-0.55
2011	ASO	-0.81	-0.3	0	0.25	0.45	0.1	-0.15	-0.3
2011	SON	-0.98	-0.65	-0.2	0	0.25	0.5	0.1	-0.15
2011	OND	-1.05	-0.85	-0.7	-0.25	-0.05	0.2	0.55	0.1
2011	NDJ	-1	-0.85	-0.9	-0.6	-0.3	-0.1	0.2	0.55
2011	DJF	-0.85	-0.9	-0.8	-0.8	-0.55	-0.3	-0.1	0.2
2012	JFM	-0.7	-0.7	-0.7	-0.7	-0.7	-0.4	-0.2	-0.05
2012	FMA	-0.54	-0.45	-0.6	-0.55	-0.5	-0.55	-0.35	-0.1
2012	MAM	-0.38	-0.4	-0.3	-0.45	-0.45	-0.4	-0.5	-0.25
2012	AMJ	-0.14	-0.15	-0.15	-0.2	-0.35	-0.45	-0.35	-0.5
2012	MJJ	0.11	0.05	0.15	0.1	0	-0.3	-0.4	-0.35
2012	JJA	0.34	0.4	0.35	0.35	0.3	0.2	-0.2	-0.35
2012	JAS	0.41	0.75	0.5	0.5	0.5	0.3	0.3	-0.1
2012	ASO	0.39	0.75	0.95	0.7	0.7	0.55	0.35	0.4
2012	SON	0.3	0.75	0.95	1.1	0.85	0.8	0.6	0.35
2012	OND	0.11	0.75	0.75	1.1	1.2	0.95	0.85	0.65
2012	NDJ	-0.18	0.15	0.75	0.8	1.2	1.2	0.95	0.9
2012	DJF	-0.42	-0.2	-0.05	0.8	0.75	1.2	1.05	0.85
	JFM	-0.42	-0.4	-0.3	-0.1	0.75	0.7	1.05	0.95
	FMA	-0.28	-0.25	-0.3	-0.25	0	0.7	0.65	0.95
	MAM	-0.21	-0.2	-0.2	-0.2	-0.15	0.15	0.65	0.6



2013	AMJ	-0.23	0	-0.15	-0.2	-0.1	-0.05	0.25	0.6
2013	MJJ	-0.28	-0.1	0.05	-0.1	-0.1	0	0.05	0.35
2013	JJA	-0.31	-0.1	0.05	0.1	-0.05	-0.05	0.1	0.15
2013	JAS	-0.27	0.05	0.1	0.2	0.2	0	0.05	0.15
2013	ASO	-0.24	-0.05	0.1	0.2	0.2	0.25	0.05	0.1
2013	SON	-0.14	0.05	0.1	0.15	0.25	0.2	0.3	0.05
2013	OND	-0.12	0.05	0.15	0.15	0.15	0.35	0.2	0.3
2013	NDJ	-0.23	0.15	0.2	0.2	0.2	0.1	0.3	0.15
2013	DJF	-0.41	0.1	0.2	0.3	0.3	0.2	0.05	0.25
2014	JFM	-0.45	0.05	0.15	0.2	0.35	0.3	0.3	0.05
2014	FMA	-0.21	-0.1	0.25	0.3	0.25	0.4	0.35	0.35
2014	MAM	0.13	0.1	0.15	0.4	0.4	0.35	0.45	0.4
2014	AMJ	0.33	0.55	0.35	0.3	0.45	0.5	0.4	0.5
2014	MJJ	0.29	0.55	0.75	0.5	0.4	0.55	0.55	0.45
2014	JJA	0.14	0.6	0.7	0.85	0.65	0.45	0.6	0.65
2014	JAS	0.11	0.65	0.75	0.8	0.95	0.7	0.5	0.65
2014	ASO	0.25	0.6	0.9	0.95	1	1.1	0.8	0.6
2014	SON	0.53	0.7	0.9	1.1	1.05	1.1	1.25	0.95
2014	OND	0.69	0.55	0.85	1	1.15	1.05	1.15	1.2
2014	NDJ	0.69	0.7	0.65	0.85	1.05	1.05	1	1.05
2014	DJF	0.56	0.65	0.65	0.65	0.9	1	1	0.95
2015	JFM	0.48	0.55	0.6	0.7	0.7	0.9	0.95	0.95
2015	FMA	0.58	0.6	0.6	0.6	0.7	0.75	0.85	0.9
2015	MAM	0.79	0.6	0.6	0.6	0.65	0.75	0.75	0.9
2015	AMJ	1.05	0.75	0.7	0.7	0.7	0.75	0.85	0.8
2015	MJJ	1.31	1.15	0.95	0.8	0.75	0.8	0.85	0.95
2015	JJA	1.61	1.35	1.35	1.1	0.85	0.75	0.95	1
2015	JAS	1.91	1.7	1.5	1.55	1.15	0.85	0.75	1.05
2015	ASO	2.19	1.95	2	1.65	1.7	1.3	0.9	0.8
2015	SON	2.47	2.05	2.15	2.25	1.8	1.85	1.45	0.95
2015	OND	2.63	2.05	2.05	2.2	2.25	1.85	1.85	1.4
2015	NDJ	2.69	2.1	1.95	1.9	2	2.05	1.75	1.65
2015	DJF	2.51	2.2	1.9	1.7	1.65	1.7	1.75	1.5
2016	JFM	2.16	2	1.95	1.7	1.5	1.4	1.45	1.4
2016	FMA	1.65	1.6	1.7	1.75	1.5	1.3	1.2	1.2
2016	MAM	1.03	1.4	1.35	1.4	1.55	1.35	1	1
2016	AMJ	0.51	0.8	1.1	1.1	1.15	1.3	1.1	0.75
2016	MJJ	0.05	0.1	0.25	0.95	0.85	0.8	1.05	0.8
	JJA	-0.27	-0.35	-0.35	-0.25	0.75	0.65	0.5	0.7
	JAS	-0.5	-0.5	-0.65	-0.6	-0.5	0.6	0.45	0.25
	ASO	-0.61	-0.65	-0.7	-0.85	-0.75	-0.75	0.5	0.2
	SON	-0.65	-0.7	-0.65	-0.8	-0.9	-0.85	-0.95	0.4



2016	OND	-0.61	-0.75	-0.7	-0.65	-0.9	-1.05	-0.95	-1.2
2016	NDJ	-0.53	-0.55	-0.8	-0.7	-0.75	-1	-1.15	-1.1
2016	DJF	-0.32	-0.35	-0.5	-0.8	-0.65	-0.75	-0.95	-1.2
2017	JFM	-0.14	-0.15	-0.35	-0.5	-0.65	-0.5	-0.7	-0.9
2017	FMA	0.11	-0.1	-0.05	-0.35	-0.45	-0.45	-0.4	-0.6
2017	MAM	0.3	0.15	0.1	0	-0.35	-0.3	-0.4	-0.35
2017	AMJ	0.43	0.3	0.3	0.2	0.05	-0.3	-0.2	-0.25
2017	MJJ	0.44	0.4	0.5	0.4	0.35	0.05	-0.3	-0.2
2017	JJA	0.23	0.55	0.5	0.6	0.55	0.45	0.1	-0.2
2017	JAS	-0.07	0.45	0.6	0.55	0.7	0.6	0.6	0.1
2017	ASO	-0.36	0.15	0.45	0.6	0.6	0.7	0.65	0.65
2017	SON	-0.62	-0.45	0.1	0.45	0.65	0.6	0.8	0.7
2017	OND	-0.79	-0.6	-0.6	0	0.4	0.65	0.6	0.85
2017	NDJ	-0.94	-0.75	-0.65	-0.65	0	0.35	0.5	0.55
2017	DJF	-0.9	-0.75	-0.8	-0.8	-0.8	-0.15	0.15	0.35
2018	JFM	-0.83	-0.7	-0.75	-0.8	-0.85	-0.85	-0.2	0.15
2018	FMA	-0.64	-0.7	-0.65	-0.65	-0.6	-0.7	-0.75	-0.1
2018	MAM	-0.41	-0.7	-0.6	-0.55	-0.55	-0.45	-0.5	-0.55
2018	AMJ	-0.1	-0.4	-0.55	-0.55	-0.55	-0.45	-0.3	-0.35
2018	MJJ	0.12	-0.15	-0.2	-0.45	-0.5	-0.5	-0.35	-0.2
2018	JJA	0.18	0.15	-0.05	-0.1	-0.45	-0.45	-0.45	-0.2
2018	JAS	0.22	0.6	0.4	0.15	0	-0.4	-0.35	-0.4

#### 4. Data JMA

TAHUN	MUSIM	Data (°C)			
		OBS	LEAD 1	LEAD 2	LEAD 3
2006	ASO	0.55	0.3	0.2	0.4
2006	SON	0.8	0.3	0.3	0.3
2006	OND	0.99	0.6	0.3	0.3
2006	NDJ	0.98	0.8	0.6	0.3
2006	DJF	0.67	0.8	0.8	0.5
2007	JFM	0.23	0.6	0.6	0.6
2007	FMA	-0.07	0.3	0.4	0.5
2007	MAM	-0.23	-0.2	0.2	0.4
2007	AMJ	-0.26	-0.3	-0.3	0.1
2007	MJJ	-0.35	-0.4	-0.4	-0.4
2007	JJA	-0.46	-0.6	-0.5	-0.6
2007	JAS	-0.76	-1.1	-0.9	-0.6
2007	ASO	-1.06	-1.1	-1.3	-1
2007	SON	-1.31	-1.3	-1.2	-1.4



2007	OND	-1.45	-1.8	-1.4	-1.2
2007	NDJ	-1.57	-1.8	-1.7	-1.3
2007	DJF	-1.63	-1.8	-1.6	-1.6
2008	JFM	-1.5	-1.7	-1.5	-1.2
2008	FMA	-1.23	-1.4	-1.3	-1.1
2008	MAM	-0.92	-1.3	-1	-0.9
2008	AMJ	-0.72	-0.8	-1	-0.8
2008	MJJ	-0.49	-0.4	-0.6	-0.8
2008	JJA	-0.28	-0.3	-0.4	-0.5
2008	JAS	-0.19	-0.2	-0.3	-0.4
2008	ASO	-0.23	-0.4	-0.2	-0.3
2008	SON	-0.32	-0.5	-0.4	-0.2
2008	OND	-0.5	-0.6	-0.5	-0.4
2008	NDJ	-0.7	-0.7	-0.5	-0.5
2008	DJF	-0.83	-0.8	-0.7	-0.5
2009	JFM	-0.77	-1.1	-0.7	-0.6
2009	FMA	-0.56	-0.9	-0.8	-0.6
2009	MAM	-0.24	-0.4	-0.7	-0.6
2009	AMJ	0.13	0	-0.2	-0.6
2009	MJJ	0.41	0.3	0.2	0
2009	JJA	0.54	0.8	0.5	0.3
2009	JAS	0.62	0.9	1	0.5
2009	ASO	0.73	0.8	1.1	1.1
2009	SON	1.04	1.1	0.9	1.2
2009	OND	1.41	1.2	1.3	1.1
2009	NDJ	1.61	1.6	1.4	1.6
2009	DJF	1.52	1.8	1.7	1.4
2010	JFM	1.24	1.5	1.7	1.6
2010	FMA	0.9	1.1	1.3	1.5
2010	MAM	0.45	0.8	0.9	1.1
2010	AMJ	-0.05	0.5	0.5	0.7
2010	MJJ	-0.53	0	0.1	0.2
2010	JJA	-0.96	-0.6	-0.3	-0.3
2010	JAS	-1.31	-1.2	-0.7	-0.5
2010	ASO	-1.54	-1.1	-1.2	-0.7
2010	SON	-1.61	-1.3	-1.1	-1.3
2010	OND	-1.59	-1.4	-1.3	-1.1
2010	NDJ	-1.56	-1.2	-1.3	-1.2
2010	DJF	-1.41	-1.1	-1.1	-1.2
2011	JFM	-1.18	-1.1	-0.9	-0.9
2011	FMA	-0.88	-0.6	-0.8	-0.6
2011	MAM	-0.65	-0.2	-0.3	-0.5



2011	AMJ	-0.43	0	0.1	0
2011	MJJ	-0.32	0.3	0.3	0.3
2011	JJA	-0.39	0.4	0.5	0.5
2011	JAS	-0.58	0.2	0.5	0.7
2011	ASO	-0.81	-0.1	0.2	0.6
2011	SON	-0.98	-0.3	0	0.3
2011	OND	-1.05	-0.5	-0.2	0
2011	NDJ	-1	-0.6	-0.4	-0.1
2011	DJF	-0.85	-0.5	-0.5	-0.2
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2012	JFM	-0.7	-0.6	-0.3	-0.3
2012	FMA	-0.54	-0.4	-0.3	-0.1
2012	MAM	-0.38	0	-0.1	-0.1
2012	AMJ	-0.14	0.2	0.2	0.2
2012	MJJ	0.11	0.5	0.6	0.5
2012	JJA	0.34	0.8	0.8	0.8
2012	JAS	0.41	1.1	1.1	1.1
2012	ASO	0.39	1.1	1.5	1.4
2012	SON	0.3	0.8	1.5	1.8
2012	OND	0.11	0.8	0.9	1.8
2012	NDJ	-0.18	0.4	0.9	1
2012	DJF	-0.42	0.2	0.3	1
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2013	JFM	-0.42	-0.3	0.1	0.2
2013	FMA	-0.28	-0.5	-0.3	0
2013	MAM	-0.21	-0.2	-0.4	-0.2
2013	AMJ	-0.23	0.2	-0.1	-0.3
2013	MJJ	-0.28	0	0.2	0.1
2013	JJA	-0.31	-0.1	0.1	0.2
2013	JAS	-0.27	-0.3	0	0
2013	ASO	-0.24	-0.3	-0.3	0
2013	SON	-0.14	0	-0.2	-0.3
2013	OND	-0.12	-0.1	0	-0.2
2013	NDJ	-0.23	0	0	0.1
2013	DJF	-0.41	0.1	0.1	0.1
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2014	JFM	-0.45	-0.1	0.1	0.1
2014	FMA	-0.21	-0.2	0	0.1
2014	MAM	0.13	0	0	0.1
2014	AMJ	0.33	0.5	0.2	0.2
2014	MJJ	0.29	0.7	0.7	0.4
2014	JJA	0.14	0.6	0.9	0.9
2014	JAS	0.11	0.2	0.6	1.1
2014	ASO	0.25	0.2	0.3	0.7
2014	SON	0.53	0.5	0.4	0.5



2014	OND	0.69	0.6	0.6	0.5
2014	NDJ	0.69	0.7	0.7	0.7
2014	DJF	0.56	0.9	0.7	0.7
2015	JFM	0.48	0.5	0.9	0.7
2015	FMA	0.58	0.4	0.4	0.8
2015	MAM	0.79	0.7	0.6	0.4
2015	AMJ	1.05	0.8	0.8	0.7
2015	MJJ	1.31	1.2	1.1	1
2015	JJA	1.61	1.6	1.5	1.3
2015	JAS	1.91	1.6	1.8	1.9
2015	ASO	2.19	2	1.9	2.1
2015	SON	2.47	2.4	2.2	2.2
2015	OND	2.63	2.7	2.5	2.4
2015	NDJ	2.69	2.4	2.6	2.4
2015	DJF	2.51	2.1	2	2.2
2016	JFM	2.16	1.9	1.6	1.5
2016	FMA	1.65	1.8	1.5	1.1
2016	MAM	1.03	1.5	1.4	1.1
2016	AMJ	0.51	0.8	0.9	0.8
2016	MJJ	0.05	-0.4	0.2	0.2
2016	JJA	-0.27	-0.7	-0.8	-0.4
2016	JAS	-0.5	-0.8	-0.8	-1.1
2016	ASO	-0.61	-0.9	-0.7	-0.9
2016	SON	-0.65	-0.7	-0.8	-0.6
2016	OND	-0.61	-0.6	-0.7	-0.8
2016	NDJ	-0.53	-0.9	-0.8	-0.8
2016	DJF	-0.32	-0.8	-1	-0.9
2017	JFM	-0.14	-0.5	-0.7	-0.9
2017	FMA	0.11	-0.1	-0.4	-0.5
2017	MAM	0.3	0.4	0.1	-0.3
2017	AMJ	0.43	0.7	0.6	0.1
2017	MJJ	0.44	0.7	0.8	0.6
2017	JJA	0.23	0.3	0.7	0.8
2017	JAS	-0.07	0.1	0.2	0.7
2017	ASO	-0.36	-0.3	0.1	0.2
2017	SON	-0.62	-0.7	-0.3	0.1
2017	OND	-0.79	-0.8	-0.7	-0.3
2017	NDJ	-0.94	-0.9	-1	-0.8
2017	DJF	-0.9	-1	-1	-1
2018	JFM	-0.83	-0.8	-0.9	-0.9
2018	FMA	-0.64	-0.6	-0.7	-0.7
2018	MAM	-0.41	-0.5	-0.5	-0.5



2018	AMJ	-0.1	-0.2	-0.3	-0.3
2018	MJJ	0.12	0	-0.1	-0.1
2018	JJA	0.18	0.2	0.1	0.1
2018	JAS	0.22	0.4	0.3	0.2

## 5. Data ECMWF

TAHUN	MUSIM	Data (°C)			
		OBS	LEAD 1	LEAD 2	LEAD 3
2006	ASO	0.55	0.3	0.5	0.3
2006	SON	0.8	0.6	0.4	0.6
2006	OND	0.99	1.1	0.8	0.5
2006	NDJ	0.98	1.2	1.1	0.9
2006	DJF	0.67	1	1.1	1.1
2007	JFM	0.23	0.6	0.8	0.9
2007	FMA	-0.07	0.5	0.4	0.6
2007	MAM	-0.23	0.1	0.3	0.2
2007	AMJ	-0.26	-0.1	-0.1	0.2
2007	MJJ	-0.35	0	-0.1	-0.2
2007	JJA	-0.46	-0.5	-0.2	-0.2
2007	JAS	-0.76	-1	-0.8	-0.5
2007	ASO	-1.06	-0.8	-1.3	-1
2007	SON	-1.31	-0.8	-0.8	-1.3
2007	OND	-1.45	-1.1	-0.8	-0.8
2007	NDJ	-1.57	-1.3	-1.1	-0.8
2007	DJF	-1.63	-1.3	-1.2	-1
2008	JFM	-1.5	-1.3	-1.1	-1.1
2008	FMA	-1.23	-1.1	-1.1	-0.8
2008	MAM	-0.92	-1	-0.8	-0.8
2008	AMJ	-0.72	-0.9	-0.8	-0.7
2008	MJJ	-0.49	-0.6	-0.7	-0.7
2008	JJA	-0.28	-0.1	-0.5	-0.6
2008	JAS	-0.19	0.2	0.1	-0.3
2008	ASO	-0.23	0.3	0.4	0.3
2008	SON	-0.32	0.3	0.3	0.5
2008	OND	-0.5	-0.1	0.3	0.3
2008	NDJ	-0.7	-0.1	-0.1	0.3
2008	DJF	-0.83	-0.4	-0.1	-0.1
2009	JFM	-0.77	-0.5	-0.4	-0.1
2009	FMA	-0.56	-0.5	-0.3	-0.3
2009	MAM	-0.24	-0.2	-0.2	-0.1



2009	AMJ	0.13	0	0	0.1
2009	MJJ	0.41	0.2	0.2	0.2
2009	JJA	0.54	0.8	0.4	0.4
2009	JAS	0.62	1	1	0.6
2009	ASO	0.73	1.3	1.1	1.2
2009	SON	1.04	1.2	1.5	1.2
2009	OND	1.41	1.3	1.3	1.6
2009	NDJ	1.61	1.2	1.4	1.3
2009	DJF	1.52	1.5	1.1	1.3
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2010	JFM	1.24	1.3	1.2	1
2010	FMA	0.9	0.9	1.1	1
2010	MAM	0.45	0.5	0.7	0.9
2010	AMJ	-0.05	0.2	0.2	0.5
2010	MJJ	-0.53	-0.2	-0.1	-0.1
2010	JJA	-0.96	-0.6	-0.5	-0.4
2010	JAS	-1.31	-1.5	-0.8	-0.8
2010	ASO	-1.54	-1.5	-1.4	-0.9
2010	SON	-1.61	-1.5	-1.5	-1.2
2010	OND	-1.59	-1.6	-1.5	-1.4
2010	NDJ	-1.56	-1.6	-1.6	-1.4
2010	DJF	-1.41	-1.4	-1.5	-1.4
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2011	JFM	-1.18	-1.2	-1.2	-1.2
2011	FMA	-0.88	-0.8	-0.9	-1
2011	MAM	-0.65	-0.7	-0.7	-0.7
2011	AMJ	-0.43	-0.7	-0.6	-0.6
2011	MJJ	-0.32	-0.4	-0.6	-0.5
2011	JJA	-0.39	0.1	-0.3	-0.5
2011	JAS	-0.58	0.1	0.2	-0.2
2011	ASO	-0.81	-0.1	0	0.2
2011	SON	-0.98	-0.3	-0.3	0
2011	OND	-1.05	-0.8	-0.4	-0.4
2011	NDJ	-1	-1.1	-0.9	-0.5
2011	DJF	-0.85	-0.9	-1	-0.9
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2012	JFM	-0.7	-0.9	-0.7	-0.8
2012	FMA	-0.54	-0.5	-0.7	-0.4
2012	MAM	-0.38	-0.2	-0.2	-0.4
2012	AMJ	-0.14	0.1	0.2	0.1
2012	MJJ	0.11	0.3	0.5	0.4
2012	JJA	0.34	0.6	0.5	0.8
2012	JAS	0.41	0.7	0.8	0.7
2012	ASO	0.39	0.7	0.8	0.9
2012	SON	0.3	0.5	0.8	0.9





2012	OND	0.11	0.5	0.6	0.9
2012	NDJ	-0.18	0.3	0.6	0.7
2012	DJF	-0.42	0	0.2	0.7
2013	JFM	-0.42	-0.1	-0.1	0.1
2013	FMA	-0.28	-0.3	-0.1	-0.1
2013	MAM	-0.21	0	-0.2	0
2013	AMJ	-0.23	0.1	0.1	-0.1
2013	MJJ	-0.28	-0.2	0.3	0.2
2013	JJA	-0.31	0	-0.1	0.4
2013	JAS	-0.27	0	0.2	0
2013	ASO	-0.24	0.1	0.1	0.3
2013	SON	-0.14	0.3	0.2	0.2
2013	OND	-0.12	0.1	0.4	0.2
2013	NDJ	-0.23	0.1	0.2	0.5
2013	DJF	-0.41	0.1	0.1	0.3
2014	JFM	-0.45	-0.1	0	0.1
2014	FMA	-0.21	-0.1	0	0.1
2014	MAM	0.13	0.2	0.2	0.2
2014	AMJ	0.33	0.6	0.5	0.5
2014	MJJ	0.29	0.9	0.9	0.8
2014	JJA	0.14	0.6	1.1	1.1
2014	JAS	0.11	0.5	0.8	1.3
2014	ASO	0.25	0.6	0.8	1
2014	SON	0.53	0.7	0.9	1.1
2014	OND	0.69	0.7	0.8	1.1
2014	NDJ	0.69	0.8	0.8	0.9
2014	DJF	0.56	0.8	0.8	0.9
2015	JFM	0.48	0.8	0.8	0.8
2015	FMA	0.58	0.6	0.7	0.7
2015	MAM	0.79	0.8	0.8	0.7
2015	AMJ	1.05	1	1.1	1.1
2015	MJJ	1.31	1.5	1.3	1.4
2015	JJA	1.61	1.5	1.8	1.6
2015	JAS	1.91	2	1.6	2.1
2015	ASO	2.19	2.4	2.4	1.9
2015	SON	2.47	2.5	2.7	2.7
2015	OND	2.63	2.6	2.7	3
2015	NDJ	2.69	2.6	2.7	2.7
2015	DJF	2.51	2.4	2.4	2.5
2016	JFM	2.16	2.2	1.9	2
2016	FMA	1.65	1.7	1.6	1.4
2016	MAM	1.03	0.9	1.2	1



2016	AMJ	0.51	0.1	0.3	0.6
2016	MJJ	0.05	-0.5	-0.5	-0.2
2016	JJA	-0.27	-0.6	-0.7	-0.6
2016	JAS	-0.5	-0.4	-0.5	-0.6
2016	ASO	-0.61	-0.3	-0.3	-0.4
2016	SON	-0.65	-0.2	-0.2	-0.2
2016	OND	-0.61	-0.3	-0.1	-0.1
2016	NDJ	-0.53	-0.4	-0.2	-0.1
2016	DJF	-0.32	-0.2	-0.2	-0.1
2017	JFM	-0.14	0	-0.1	0
2017	FMA	0.11	0.2	0.1	0.1
2017	MAM	0.3	0.4	0.4	0.3
2017	AMJ	0.43	0.4	0.6	0.6
2017	MJJ	0.44	0.6	0.6	0.8
2017	JJA	0.23	0.3	0.7	0.8
2017	JAS	-0.07	0.4	0.3	0.7
2017	ASO	-0.36	0	0.4	0.3
2017	SON	-0.62	-0.6	0	0.4
2017	OND	-0.79	-0.8	-0.7	0.1
2017	NDJ	-0.94	-0.8	-0.8	-0.7
2017	DJF	-0.9	-0.9	-0.9	-0.7
2018	JFM	-0.83	-0.7	-0.7	-0.8
2018	FMA	-0.64	-0.5	-0.5	-0.6
2018	MAM	-0.41	-0.4	-0.2	-0.2
2018	AMJ	-0.1	-0.1	-0.1	0
2018	MJJ	0.12	0.1	0.2	0.1
2018	JJA	0.18	0.5	0.3	0.5
2018	JAS	0.22	0.6	0.7	0.5

#### 6. Data AVEDyn (4 Model)

TAHUN	MUSIM	Data (°C)			
		OBS	LEAD 1	LEAD 2	LEAD 3
2006	ASO	0.55	0.475	0.45	0.55
2006	SON	0.8	0.725	0.575	0.55
2006	OND	0.99	0.9	0.85	0.6
2006	NDJ	0.98	0.975	0.95	0.925
2006	DJF	0.67	0.9	1	0.975
2007	JFM	0.23	0.65	0.8	0.925
2007	FMA	-0.07	0.275	0.475	0.7
2007	MAM	-0.23	-0.125	0.15	0.4



2007	AMJ	-0.26	-0.25	-0.225	0.075
2007	MJJ	-0.35	-0.35	-0.35	-0.3
2007	JJA	-0.46	-0.55	-0.525	-0.525
2007	JAS	-0.76	-0.875	-0.825	-0.65
2007	ASO	-1.06	-0.8	-1.025	-0.95
2007	SON	-1.31	-0.975	-0.85	-1
2007	OND	-1.45	-1.375	-1	-0.825
2007	NDJ	-1.57	-1.525	-1.325	-0.95
2007	DJF	-1.63	-1.575	-1.5	-1.275
2008	JFM	-1.5	-1.55	-1.525	-1.375
2008	FMA	-1.23	-1.275	-1.35	-1.35
2008	MAM	-0.92	-1.125	-1	-1.1
2008	AMJ	-0.72	-0.85	-0.925	-0.85
2008	MJJ	-0.49	-0.425	-0.625	-0.75
2008	JJA	-0.28	-0.05	-0.175	-0.475
2008	JAS	-0.19	0.075	0.15	0.025
2008	ASO	-0.23	0	0.225	0.275
2008	SON	-0.32	-0.075	0	0.275
2008	OND	-0.5	-0.325	-0.05	0.025
2008	NDJ	-0.7	-0.4	-0.3	-0.025
2008	DJF	-0.83	-0.75	-0.45	-0.275
2009	JFM	-0.77	-0.725	-0.75	-0.45
2009	FMA	-0.56	-0.55	-0.5	-0.675
2009	MAM	-0.24	-0.35	-0.325	-0.35
2009	AMJ	0.13	-0.05	-0.15	-0.125
2009	MJJ	0.41	0.275	0.15	0.05
2009	JJA	0.54	0.75	0.475	0.325
2009	JAS	0.62	0.95	0.95	0.6
2009	ASO	0.73	1.05	1.125	1.125
2009	SON	1.04	1.15	1.225	1.3
2009	OND	1.41	1.175	1.275	1.35
2009	NDJ	1.61	1.275	1.25	1.4
2009	DJF	1.52	1.525	1.25	1.175
2010	JFM	1.24	1.35	1.325	1.15
2010	FMA	0.9	1.075	1.175	1.175
2010	MAM	0.45	0.725	0.9	1.025
2010	AMJ	-0.05	0.375	0.45	0.725
2010	MJJ	-0.53	-0.1	0.1	0.225
2010	JJA	-0.96	-0.725	-0.35	-0.175
2010	JAS	-1.31	-1.175	-0.825	-0.475
2010	ASO	-1.54	-1.15	-1.2	-0.825
2010	SON	-1.61	-1.3	-1.225	-1.175



2010	OND	-1.59	-1.5	-1.35	-1.225
2010	NDJ	-1.56	-1.4	-1.4	-1.25
2010	DJF	-1.41	-1.3	-1.275	-1.225
2011	JFM	-1.18	-1.175	-1.125	-1.1
2011	FMA	-0.88	-0.825	-0.9	-0.925
2011	MAM	-0.65	-0.625	-0.65	-0.75
2011	AMJ	-0.43	-0.45	-0.45	-0.5
2011	MJJ	-0.32	-0.1	-0.25	-0.275
2011	JJA	-0.39	0.125	0.1	-0.075
2011	JAS	-0.58	0.05	0.275	0.275
2011	ASO	-0.81	-0.2	0.05	0.325
2011	SON	-0.98	-0.475	-0.175	0.075
2011	OND	-1.05	-0.75	-0.5	-0.225
2011	NDJ	-1	-0.85	-0.775	-0.45
2011	DJF	-0.85	-0.8	-0.775	-0.675
2012	JFM	-0.7	-0.725	-0.6	-0.625
2012	FMA	-0.54	-0.45	-0.55	-0.4
2012	MAM	-0.38	-0.25	-0.225	-0.35
2012	AMJ	-0.14	0	0.025	-0.025
2012	MJJ	0.11	0.225	0.35	0.275
2012	JJA	0.34	0.55	0.5	0.575
2012	JAS	0.41	0.825	0.725	0.7
2012	ASO	0.39	0.825	1.05	0.925
2012	SON	0.3	0.7	1.05	1.225
2012	OND	0.11	0.7	0.75	1.225
2012	NDJ	-0.18	0.25	0.75	0.825
2012	DJF	-0.42	-0.05	0.1	0.825
2013	JFM	-0.42	-0.3	-0.15	0.025
2013	FMA	-0.28	-0.325	-0.25	-0.15
2013	MAM	-0.21	-0.15	-0.25	-0.15
2013	AMJ	-0.23	0.075	-0.075	-0.2
2013	MJJ	-0.28	-0.1	0.15	0.025
2013	JJA	-0.31	-0.075	0.025	0.2
2013	JAS	-0.27	-0.05	0.1	0.1
2013	ASO	-0.24	-0.075	0	0.175
2013	SON	-0.14	0.1	0.05	0.05
2013	OND	-0.12	0.025	0.175	0.075
2013	NDJ	-0.23	0.1	0.15	0.25
2013	DJF	-0.41	0.1	0.15	0.25
2014	JFM	-0.45	-0.025	0.1	0.15
2014	FMA	-0.21	-0.125	0.125	0.2
2014	MAM	0.13	0.1	0.125	0.275



2014	AMJ	0.33	0.55	0.35	0.325
2014	MJJ	0.29	0.675	0.775	0.55
2014	JJA	0.14	0.6	0.85	0.925
2014	JAS	0.11	0.5	0.725	1
2014	ASO	0.25	0.5	0.725	0.9
2014	SON	0.53	0.65	0.775	0.95
2014	OND	0.69	0.6	0.775	0.9
2014	NDJ	0.69	0.725	0.7	0.825
2014	DJF	0.56	0.75	0.7	0.725
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2015	JFM	0.48	0.6	0.725	0.725
2015	FMA	0.58	0.55	0.575	0.675
2015	MAM	0.79	0.675	0.65	0.575
2015	AMJ	1.05	0.825	0.825	0.8
2015	MJJ	1.31	1.25	1.075	1
2015	JJA	1.61	1.45	1.5	1.275
2015	JAS	1.91	1.75	1.6	1.775
2015	ASO	2.19	2.075	2.075	1.825
2015	SON	2.47	2.25	2.3	2.35
2015	OND	2.63	2.35	2.325	2.45
2015	NDJ	2.69	2.3	2.3	2.225
2015	DJF	2.51	2.225	2.05	2.025
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2016	JFM	2.16	2.025	1.85	1.725
2016	FMA	1.65	1.675	1.625	1.5
2016	MAM	1.03	1.3	1.325	1.225
2016	AMJ	0.51	0.625	0.85	0.9
2016	MJJ	0.05	-0.175	0.05	0.475
2016	JJA	-0.27	-0.5	-0.55	-0.375
2016	JAS	-0.5	-0.55	-0.65	-0.725
2016	ASO	-0.61	-0.625	-0.6	-0.75
2016	SON	-0.65	-0.575	-0.575	-0.6
2016	OND	-0.61	-0.6	-0.55	-0.55
2016	NDJ	-0.53	-0.6	-0.65	-0.575
2016	DJF	-0.32	-0.425	-0.55	-0.65
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2017	JFM	-0.14	-0.2	-0.375	-0.475
2017	FMA	0.11	-0.025	-0.1	-0.275
2017	MAM	0.3	0.275	0.175	0
2017	AMJ	0.43	0.425	0.45	0.275
2017	MJJ	0.44	0.525	0.6	0.55
2017	JJA	0.23	0.425	0.6	0.7
2017	JAS	-0.07	0.35	0.425	0.625
2017	ASO	-0.36	0	0.35	0.425
2017	SON	-0.62	-0.55	-0.025	0.35



2017	OND	-0.79	-0.7	-0.65	-0.05
2017	NDJ	-0.94	-0.8	-0.775	-0.7
2017	DJF	-0.9	-0.85	-0.875	-0.825
2018	JFM	-0.83	-0.725	-0.775	-0.825
2018	FMA	-0.64	-0.625	-0.625	-0.65
2018	MAM	-0.41	-0.575	-0.475	-0.45
2018	AMJ	-0.1	-0.275	-0.375	-0.35
2018	MJJ	0.12	-0.05	-0.075	-0.225
2018	JJA	0.18	0.25	0.075	0.1
2018	JAS	0.22	0.55	0.45	0.25

### 7. Data AVEDyn (3 Model)

TAHUN	MUSIM	Data (°C)			
		OBS	LEAD 1	LEAD 2	LEAD 3
2006	ASO	0.55	0.366667	0.3	0.4
2006	SON	0.8	0.633333	0.433333	0.4
2006	OND	0.99	0.9	0.766667	0.466667
2006	NDJ	0.98	1	0.966667	0.866667
2006	DJF	0.67	0.9	1.033333	1
2007	JFM	0.23	0.533333	0.766667	0.933333
2007	FMA	-0.07	0.166667	0.333333	0.633333
2007	MAM	-0.23	-0.2	0	0.266667
2007	AMJ	-0.26	-0.23333	-0.33333	-0.06667
2007	MJJ	-0.35	-0.33333	-0.36667	-0.43333
2007	JJA	-0.46	-0.6	-0.56667	-0.63333
2007	JAS	-0.76	-1.03333	-0.96667	-0.76667
2007	ASO	-1.06	-0.96667	-1.23333	-1.13333
2007	SON	-1.31	-1.13333	-1.03333	-1.2
2007	OND	-1.45	-1.56667	-1.16667	-1
2007	NDJ	-1.57	-1.66667	-1.5	-1.13333
2007	DJF	-1.63	-1.66667	-1.63333	-1.43333
2008	JFM	-1.5	-1.66667	-1.63333	-1.5
2008	FMA	-1.23	-1.33333	-1.46667	-1.46667
2008	MAM	-0.92	-1.16667	-1.03333	-1.16667
2008	AMJ	-0.72	-0.93333	-1	-0.93333
2008	MJJ	-0.49	-0.43333	-0.73333	-0.86667
2008	JJA	-0.28	-0.06667	-0.23333	-0.63333
2008	JAS	-0.19	0.066667	0.1	-0.06667
2008	ASO	-0.23	-0.03333	0.166667	0.166667
2008	SON	-0.32	-0.16667	-0.1	0.166667



2008	OND	-0.5	-0.43333	-0.2	-0.13333
2008	NDJ	-0.7	-0.46667	-0.43333	-0.23333
2008	DJF	-0.83	-0.86667	-0.6	-0.46667
2009	JFM	-0.77	-0.76667	-0.9	-0.63333
2009	FMA	-0.56	-0.56667	-0.53333	-0.83333
2009	MAM	-0.24	-0.3	-0.33333	-0.36667
2009	AMJ	0.13	0	-0.13333	-0.13333
2009	MJJ	0.41	0.33333	0.2	0.06667
2009	JJA	0.54	0.9	0.53333	0.36667
2009	JAS	0.62	1	1.1	0.63333
2009	ASO	0.73	1.06667	1.16667	1.26667
2009	SON	1.04	1.16667	1.23333	1.33333
2009	OND	1.41	1.3	1.33333	1.4
2009	NDJ	1.61	1.43333	1.4	1.5
2009	DJF	1.52	1.63333	1.36667	1.3
2010	JFM	1.24	1.36667	1.4	1.26667
2010	FMA	0.9	1.06667	1.16667	1.2
2010	MAM	0.45	0.7	0.86667	1
2010	AMJ	-0.05	0.36667	0.36667	0.66667
2010	MJJ	-0.53	-0.2	0.03333	0.1
2010	JJA	-0.96	-0.73333	-0.46667	-0.3
2010	JAS	-1.31	-1.2	-0.83333	-0.63333
2010	ASO	-1.54	-1.2	-1.23333	-0.86667
2010	SON	-1.61	-1.46667	-1.33333	-1.26667
2010	OND	-1.59	-1.6	-1.56667	-1.4
2010	NDJ	-1.56	-1.46667	-1.53333	-1.5
2010	DJF	-1.41	-1.36667	-1.36667	-1.36667
2011	JFM	-1.18	-1.16667	-1.16667	-1.16667
2011	FMA	-0.88	-0.7	-0.83333	-0.9
2011	MAM	-0.65	-0.5	-0.5	-0.63333
2011	AMJ	-0.43	-0.36667	-0.33333	-0.33333
2011	MJJ	-0.32	0	-0.16667	-0.16667
2011	JJA	-0.39	0.2	0.16667	-0.03333
2011	JAS	-0.58	0.03333	0.26667	0.3
2011	ASO	-0.81	-0.23333	-0.03333	0.26667
2011	SON	-0.98	-0.53333	-0.26667	-0.06667
2011	OND	-1.05	-0.86667	-0.63333	-0.4
2011	NDJ	-1	-0.93333	-0.93333	-0.63333
2011	DJF	-0.85	-0.86667	-0.9	-0.86667
2012	JFM	-0.7	-0.8	-0.66667	-0.73333
2012	FMA	-0.54	-0.5	-0.6	-0.46667
2012	MAM	-0.38	-0.23333	-0.23333	-0.36667



2012	AMJ	-0.14	0.066667	0.066667	0
2012	MJJ	0.11	0.266667	0.433333	0.3
2012	JJA	0.34	0.6	0.5	0.633333
2012	JAS	0.41	0.833333	0.766667	0.7
2012	ASO	0.39	0.833333	1.066667	0.966667
2012	SON	0.3	0.666667	1.066667	1.233333
2012	OND	0.11	0.666667	0.7	1.233333
2012	NDJ	-0.18	0.233333	0.7	0.766667
2012	DJF	-0.42	-0.1	0.033333	0.766667
2013	JFM	-0.42	-0.333333	-0.233333	-0.066667
2013	FMA	-0.28	-0.3	-0.266667	-0.233333
2013	MAM	-0.21	-0.066667	-0.233333	-0.166667
2013	AMJ	-0.23	0.233333	0	-0.166667
2013	MJJ	-0.28	-0.033333	0.233333	0.066667
2013	JJA	-0.31	-0.033333	0.066667	0.233333
2013	JAS	-0.27	-0.1	0.133333	0.066667
2013	ASO	-0.24	-0.1	-0.033333	0.2
2013	SON	-0.14	0.166667	0.066667	0
2013	OND	-0.12	0.066667	0.233333	0.066667
2013	NDJ	-0.23	0.066667	0.166667	0.3
2013	DJF	-0.41	0	0.066667	0.266667
2014	JFM	-0.45	-0.1	-0.033333	0.033333
2014	FMA	-0.21	-0.133333	0.066667	0.066667
2014	MAM	0.13	0.1	0.133333	0.233333
2014	AMJ	0.33	0.6	0.4	0.366667
2014	MJJ	0.29	0.733333	0.866667	0.633333
2014	JJA	0.14	0.533333	0.9	1.033333
2014	JAS	0.11	0.4	0.633333	1.066667
2014	ASO	0.25	0.433333	0.6	0.8
2014	SON	0.53	0.6	0.733333	0.866667
2014	OND	0.69	0.6	0.733333	0.9
2014	NDJ	0.69	0.766667	0.7	0.8
2014	DJF	0.56	0.733333	0.7	0.733333
2015	JFM	0.48	0.566667	0.7	0.7
2015	FMA	0.58	0.566667	0.533333	0.633333
2015	MAM	0.79	0.733333	0.7	0.566667
2015	AMJ	1.05	0.933333	0.933333	0.9
2015	MJJ	1.31	1.4	1.266667	1.166667
2015	JJA	1.61	1.566667	1.733333	1.533333
2015	JAS	1.91	1.866667	1.733333	2.066667
2015	ASO	2.19	2.166667	2.266667	2
2015	SON	2.47	2.366667	2.466667	2.6



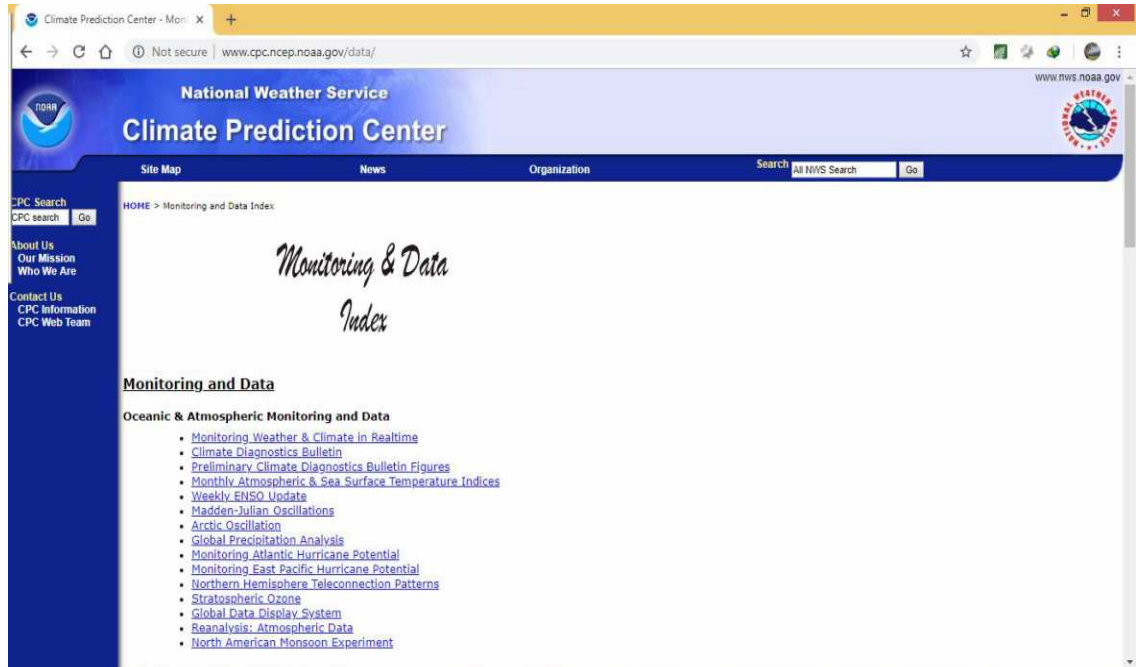


2015	OND	2.63	2.533333	2.5	2.7
2015	NDJ	2.69	2.5	2.5	2.4
2015	DJF	2.51	2.4	2.2	2.2
2016	JFM	2.16	2.133333	1.966667	1.8
2016	FMA	1.65	1.7	1.666667	1.533333
2016	MAM	1.03	1.3	1.333333	1.2
2016	AMJ	0.51	0.5	0.8	0.833333
2016	MJJ	0.05	-0.4	-0.166667	0.366667
2016	JJA	-0.27	-0.6	-0.8	-0.633333
2016	JAS	-0.5	-0.5	-0.7	-0.933333
2016	ASO	-0.61	-0.566667	-0.533333	-0.766667
2016	SON	-0.65	-0.5	-0.466667	-0.5
2016	OND	-0.61	-0.6	-0.466667	-0.433333
2016	NDJ	-0.53	-0.633333	-0.666667	-0.533333
2016	DJF	-0.32	-0.5	-0.6	-0.666667
2017	JFM	-0.14	-0.2	-0.433333	-0.5
2017	FMA	0.11	0.066667	-0.066667	-0.3
2017	MAM	0.3	0.366667	0.333333	0.066667
2017	AMJ	0.43	0.533333	0.6	0.466667
2017	MJJ	0.44	0.6	0.733333	0.7
2017	JJA	0.23	0.4	0.633333	0.8
2017	JAS	-0.07	0.3	0.366667	0.6
2017	ASO	-0.36	-0.066667	0.266667	0.3
2017	SON	-0.62	-0.633333	-0.133333	0.233333
2017	OND	-0.79	-0.766667	-0.8	-0.166667
2017	NDJ	-0.94	-0.9	-0.9	-0.9
2017	DJF	-0.9	-0.966667	-1.033333	-1
2018	JFM	-0.83	-0.8	-0.866667	-0.966667
2018	FMA	-0.64	-0.633333	-0.666667	-0.733333
2018	MAM	-0.41	-0.566667	-0.466667	-0.466667
2018	AMJ	-0.1	-0.2	-0.366667	-0.333333
2018	MJJ	0.12	0	0	-0.2
2018	JJA	0.18	0.333333	0.133333	0.2
2018	JAS	0.22	0.533333	0.5	0.266667

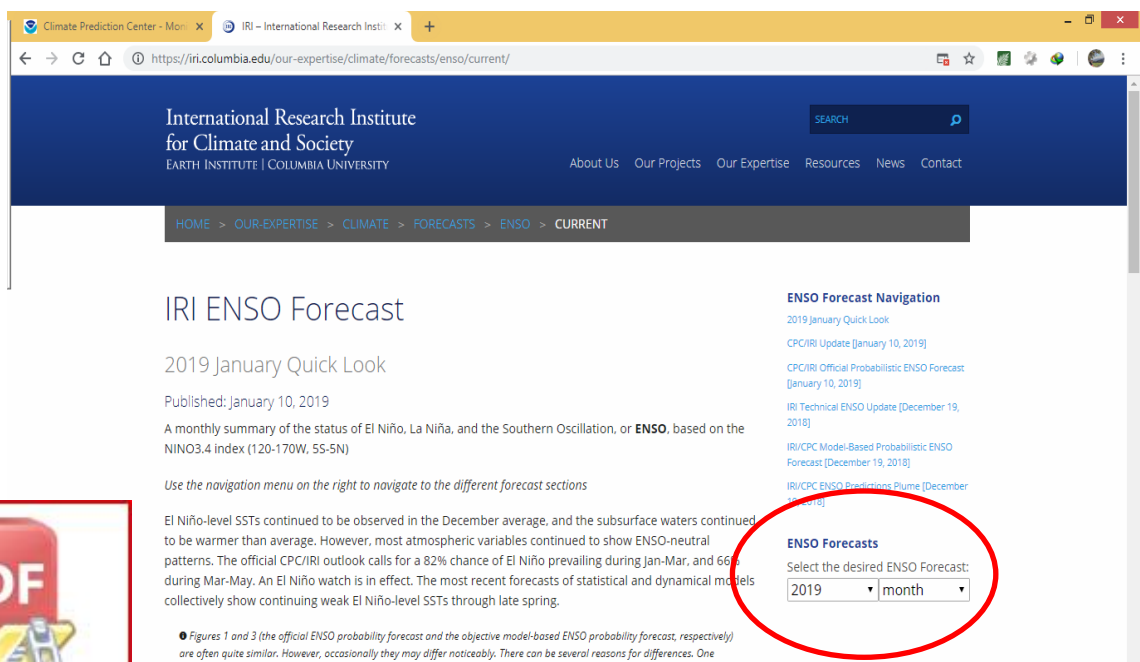


## LAMPIRAN 2

Laman untuk mendapatkan data observasi ENSO:



Laman untuk mendapatkan data prediksi ENSO Musiman Model Dinamik Operasional IRI:



Climate Prediction Center - Mon x IRI - International Research Insti x +  
 https://iri.columbia.edu/our-expertise/climate/forecasts/enso/2018-January-quick-look/?enso\_tab=enso\_sst\_table

Model	Seasons (2018-2018)									
	JFM	FMA	MAM	AMJ	MJJ	JJA	JAS	ASO	SON	
<i>Dynamical models</i>										
NASA GMAO model	-0.6	-0.6	-0.5	-0.4	-0.2	-0.1	-0.1			
NCEP CFS version 2	-0.9	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7		
Japan Met. Agency model	-0.8	-0.7	-0.5	-0.3	-0.1					
Beijing Climate Center BCC-CSM1.1M	-0.7	-0.5	-0.1	0.4	0.9	1.3	1.5	1.5	1.5	
King Abdulaziz University (Saudi Arabia)	-0.4	-0.1	0.2	0.4	0.6	0.7	0.7	0.8	0.9	
Lamont-Doherty model	-0.2	0.2	0.4	0.6	0.8	0.9	0.9	1	1.1	
POAMA (Austr) model	-0.9	-0.8	-0.7	-0.7	-0.7	-0.6	-0.4			
ECMWF model	-0.7	-0.5	-0.2	0	0.2					
UKMO model	-0.6	-0.6	-0.6	-0.4						
KMA (Korea) SNU model	-0.5	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	0	0.1	
IOCAS (China) Intermed. Coupled model	-0.5	-0.3	-0.1	0.1	0.4	0.5	0.6	0.7	0.8	
COLA CCSM4 model	-0.8	-0.8	-0.7	-0.5	-0.4	-0.3	-0.2	-0.2	-0.3	
MÉTÉO FRANCE model	-1.1	-1	-0.8	-0.5	-0.2					
Japan Frontier Coupled model	-0.5	-0.4	-0.3	-0.2	0	0.2	0.2	0.2	0.2	
CSIR-IRI 3-model MME	-0.6	-0.4	-0.3	-0.1	-0.1	0				
GFDL CM2.1 Coupled Climate model	-0.7	-0.5	-0.3	-0.1	0.2	0.4	0.5	0.3	0.2	
Canadian Coupled Fcst Sys	-0.8	-0.6	-0.4	0	0.2	0.5	0.6	0.6	0.7	

Climate Prediction Center - Mon x IRI - International Research Insti x +  
 https://iri.columbia.edu/our-expertise/climate/forecasts/enso/2018-January-quick-look/?enso\_tab=enso\_sst\_table

NCEP CFS version 2	-0.9	-0.8	-0.7	-0.7	-0.7	-0.7	-0.7	-0.7		
Japan Met. Agency model	-0.8	-0.7	-0.5	-0.3	-0.1					
Beijing Climate Center BCC-CSM1.1M	-0.7	-0.5	-0.1	0.4	0.9	1.3	1.5	1.5	1.5	
King Abdulaziz University (Saudi Arabia)	-0.4	-0.1	0.2	0.4	0.6	0.7	0.7	0.8	0.9	
Lamont-Doherty model	-0.2	0.2	0.4	0.6	0.8	0.9	0.9	1	1.1	
POAMA (Austr) model	-0.9	-0.8	-0.7	-0.7	-0.7	-0.6	-0.4			
ECMWF model	-0.7	-0.5	-0.2	0	0.2					
UKMO model	-0.6	-0.6	-0.6	-0.4						
KMA (Korea) SNU model	-0.5	-0.5	-0.4	-0.4	-0.3	-0.2	-0.1	0	0.1	
IOCAS (China) Intermed. Coupled model	-0.5	-0.3	-0.1	0.1	0.4	0.5	0.6	0.7	0.8	
COLA CCSM4 model	-0.8	-0.8	-0.7	-0.5	-0.4	-0.3	-0.2	-0.2	-0.3	
MÉTÉO FRANCE model	-1.1	-1	-0.8	-0.5	-0.2					
Japan Frontier Coupled model	-0.5	-0.4	-0.3	-0.2	0	0.2	0.2	0.2	0.2	
CSIR-IRI 3-model MME	-0.6	-0.4	-0.3	-0.1	-0.1	0				
GFDL CM2.1 Coupled Climate model	-0.7	-0.5	-0.3	-0.1	0.2	0.4	0.5	0.3	0.2	
Canadian Coupled Fcst Sys	-0.8	-0.6	-0.4	0	0.2	0.5	0.6	0.6	0.7	
GFDL CM2.5 FLOR Coupled Climate model	-0.7	-0.4	-0.1	0.1	0.4	0.7	0.9	0.9	0.9	
Average, dynamical models	-0.7	-0.5	-0.3	-0.1	0.1	0.2	0.3	0.5	0.6	

