

Correction

Correction: Brodzik, M.J., et al. EASE-Grid 2.0: Incremental but Significant Improvements for Earth-Gridded Data Sets. ISPRS International Journal of Geo-Information 2012, 1, 32–45

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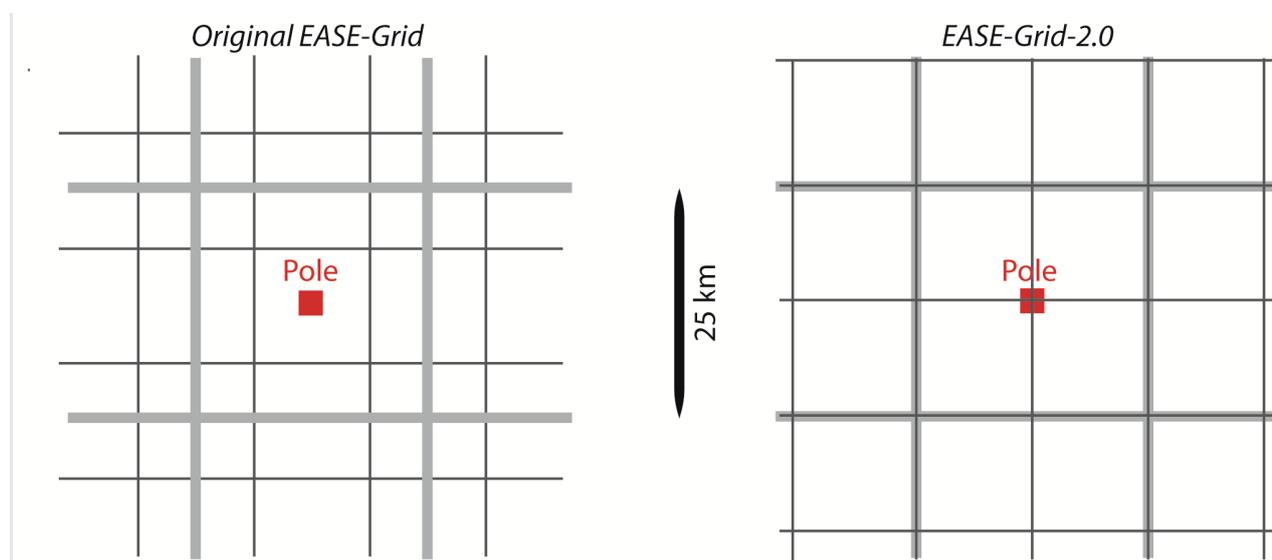
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We wish to make the following corrections to this paper [1]:

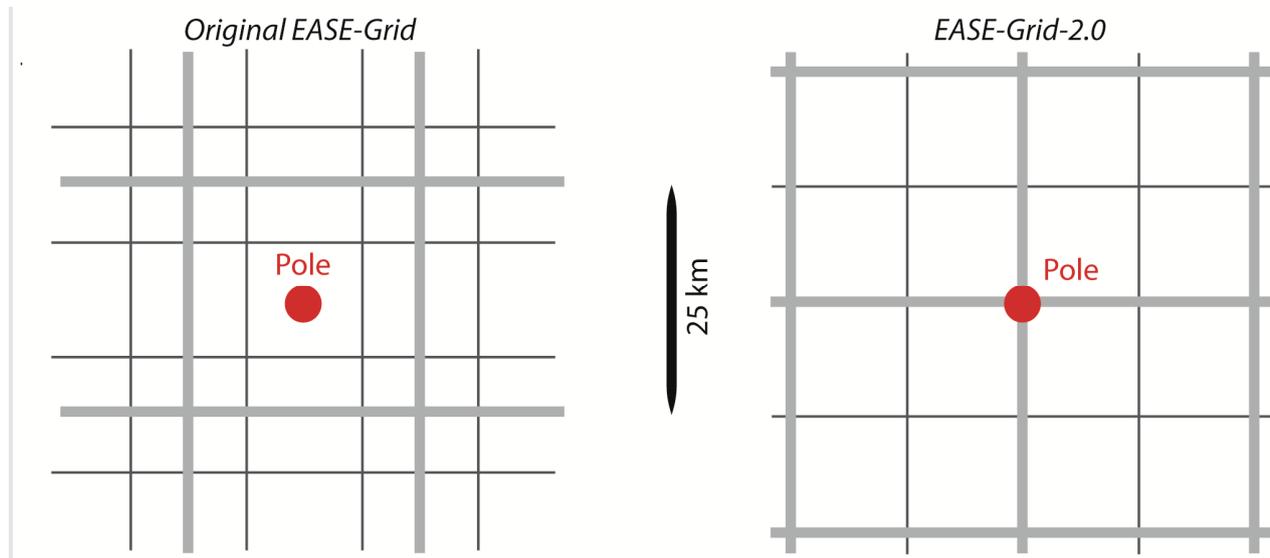
(1) The right hand side of Figure 5 is incorrect.

Figure 5. Relative gridding schemes for representative azimuthal 25 km and 12.5 km original *EASE-Grid* ((**Left**), bore-centered) vs. *EASE-Grid 2.0* ((**Right**), nested) cells near the pole.



The pole should be at the intersection of the center four 25 km cells. This is the corrected Figure 5:

Figure 5. Relative gridding schemes for representative azimuthal 25 km and 12.5 km original *EASE-Grid* ((**Left**), bore-centered) vs. *EASE-Grid 2.0* ((**Right**), nested) cells near the pole.



(2) The scale of 25,025.2600081 m for the 25 km cylindrical *EASE-Grid 2.0* causes some mapping software to transform locations along the left edge to longitude 180.0 and locations along the right edge to -180.0. The desirable behavior is to transform the left edge to longitude -180.0 and the right edge to longitude 180.0. We have therefore decided to define the 25 km cylindrical *EASE-Grid 2.0* scale to be 25,025.2600000, which corrects the problem.

(3) In Appendix A, to clarify the Azimuthal *EASE-Grid 2.0* Forward Formulae, we add the following symbol to the Definition section:

$$\epsilon = 10.0^{-12}; \text{ constant used to avoid taking square root of a negative number in Equation (10).}$$

and replace the Azimuthal *EASE-Grid* Forward Formulae Definition with:

Definition (Azimuthal *EASE-Grid 2.0* Forward Formulae ([26], pp. 187–188)). Use $q(\phi)$ from Equation (2), and let

$$q_p = q(\phi = 90^\circ) \tag{9}$$

$$\rho = \begin{cases} \left. \begin{aligned} &0.0, \text{ if } |q_p - q(\phi)| < \epsilon \\ &a\sqrt{q_p - q(\phi)}, \text{ otherwise} \end{aligned} \right\} \text{ if } \phi_0 = 90.0^\circ \\ \left. \begin{aligned} &0.0, \text{ if } |q_p + q(\phi)| < \epsilon \\ &a\sqrt{q_p + q(\phi)}, \text{ otherwise} \end{aligned} \right\} \text{ if } \phi_0 = -90.0^\circ \end{cases} \tag{10}$$

then

$$x = \rho \sin(\lambda - \lambda_0) \tag{11}$$

$$y = \begin{cases} -\rho \cos(\lambda - \lambda_0), & \text{if } \phi_0 = 90.0^\circ \\ \rho \cos(\lambda - \lambda_0), & \text{if } \phi_0 = -90.0^\circ \end{cases} \quad (12)$$

Furthermore, in Equations (15) and (17), the following changes should clarify the cases for each hemisphere:

Replace “*if North*” with “*if $\phi_0 = 90.0^\circ$* ”

Replace “*if South*” with “*if $\phi_0 = -90.0^\circ$* ”

(4) Finally, there was a typographical error in Appendix C, Table 2, in the PROJ.4 arguments for the *EASE-Grid 2.0* cylindrical projection definition. The corrected PROJ.4 arguments for the *EASE-Grid 2.0* cylindrical projection definition are:

+proj=cea +lat_0=0 +lon_0=0 +lat_ts=30 +x_0=0 +y_0=0 +ellps=WGS84 +datum=WGS84 +units=m

We apologize if these errors caused any inconvenience to the readers.

Reference

1. Brodzik, M.J.; Billingsley, B.; Haran, T.; Raup, B.; Savoie, M.H. *EASE-Grid 2.0*: Incremental but significant improvements for Earth-Gridded data sets. *ISPRS Int. J. Geo-Inf.* **2012**, *1*, 32–45.

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