

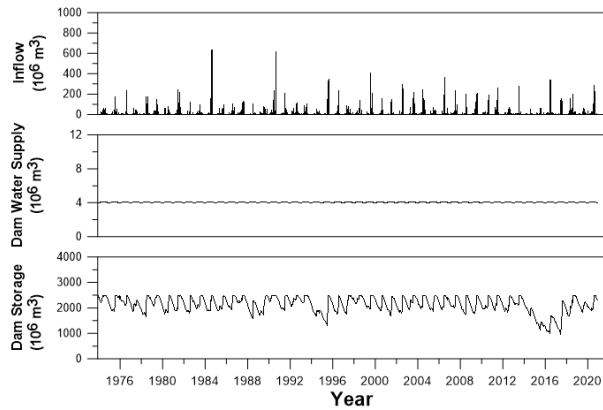
# Evaluation of Dam Water-Supply Capacity in Korea Using the Water-Shortage Index

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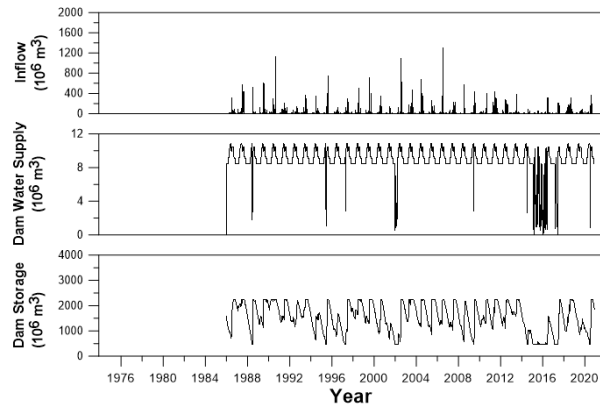
<sup>1</sup> School of Civil, Environmental and Architectural Engineering, College of Engineering, Korea University, Seoul 02841, Korea; envchul@korea.ac.kr (C.Y.); khjoo1214@gmail.com (J.H.Z.)

<sup>2</sup> Department of Civil and Environmental Engineering, College of Engineering, Chung-Ang University, Seoul 06974, Korea; cjun@cau.ac.kr

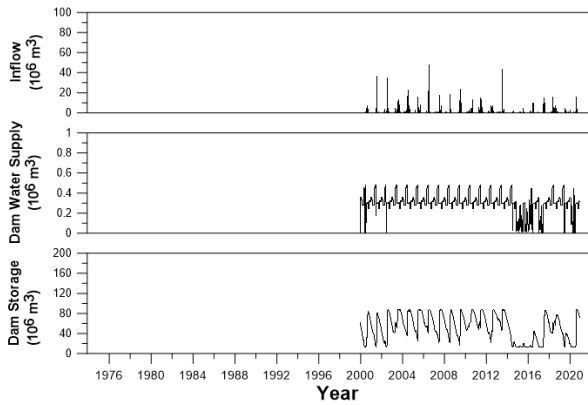
\* Correspondence: uoo921227@gmail.com; Tel.: +82-2-3290-3912



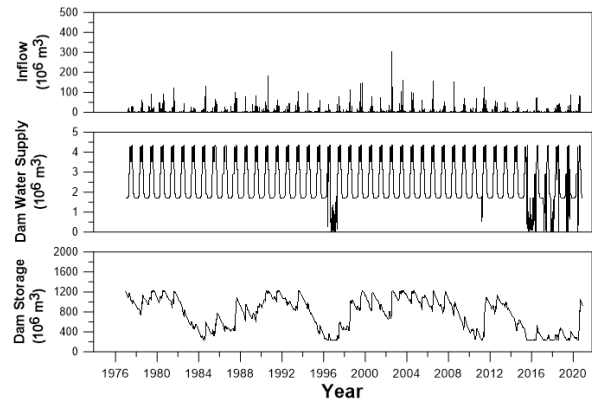
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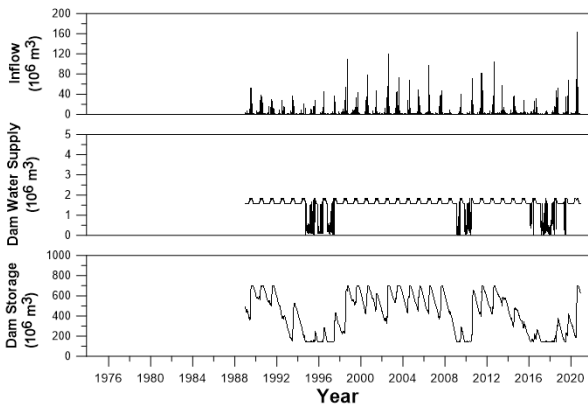
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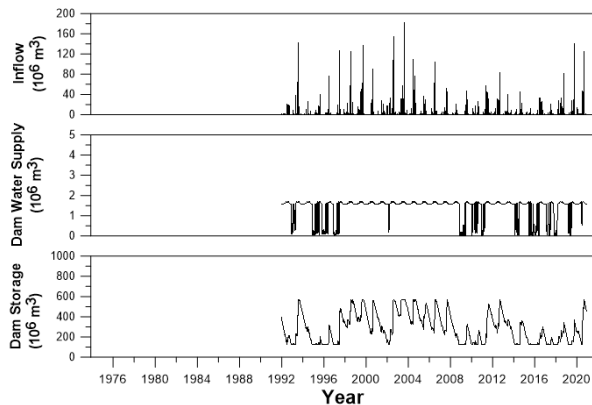
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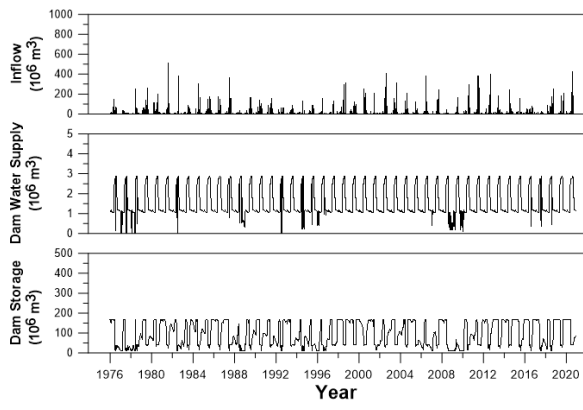
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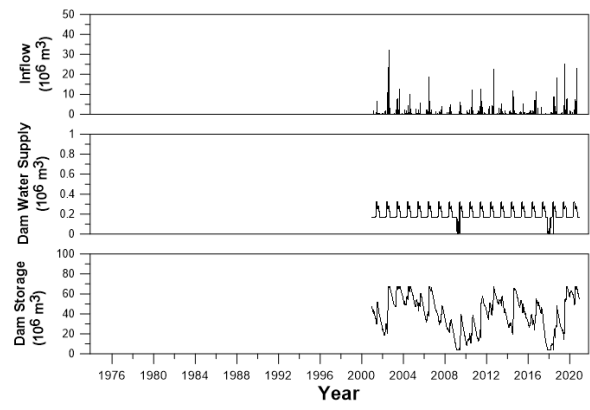
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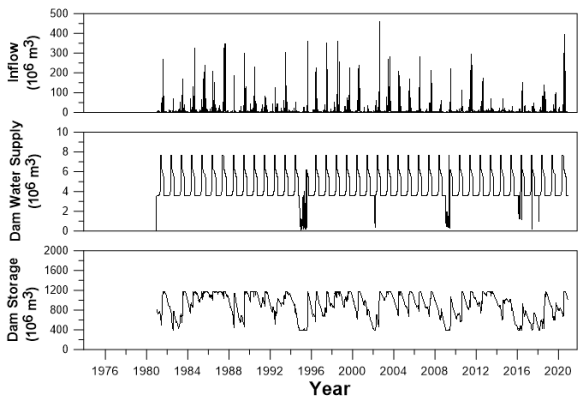
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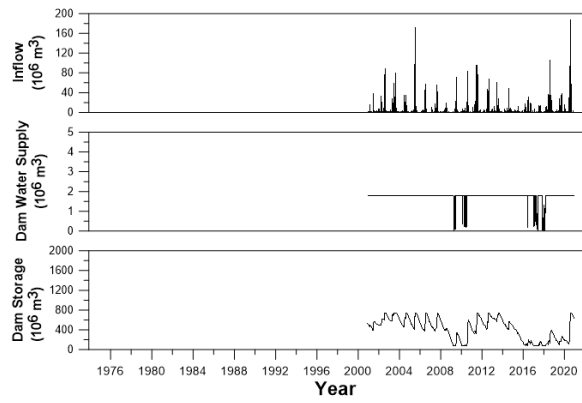
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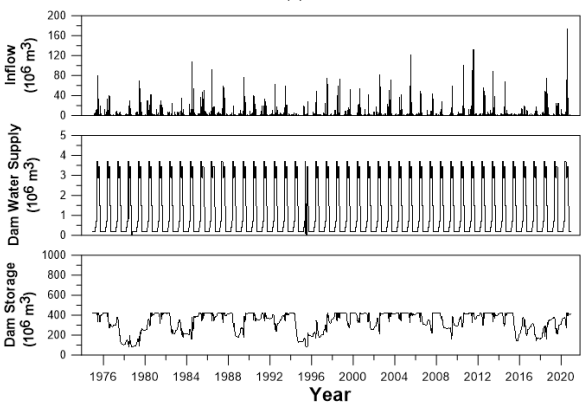
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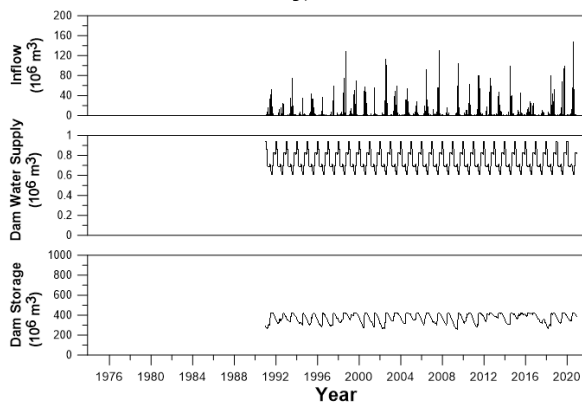
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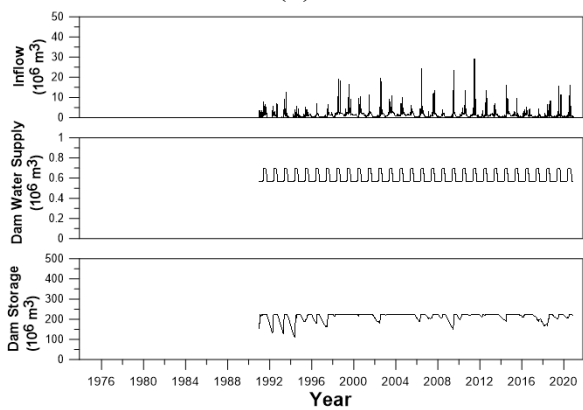
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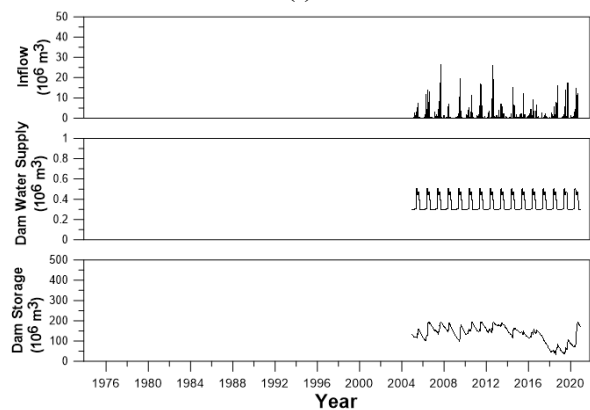
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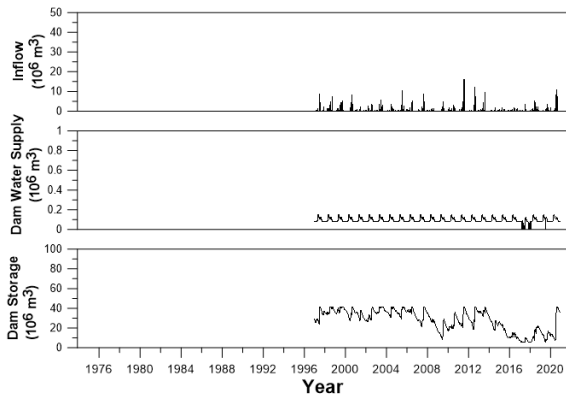
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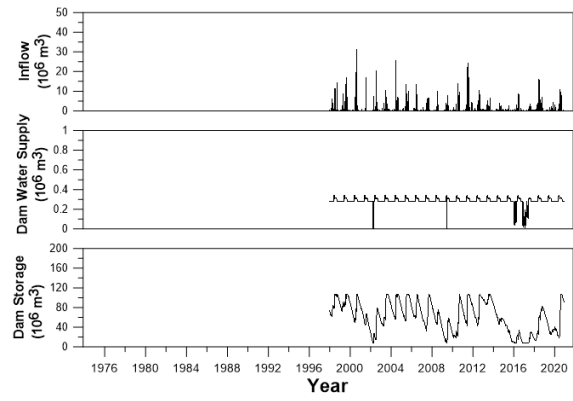
(m)



(n)

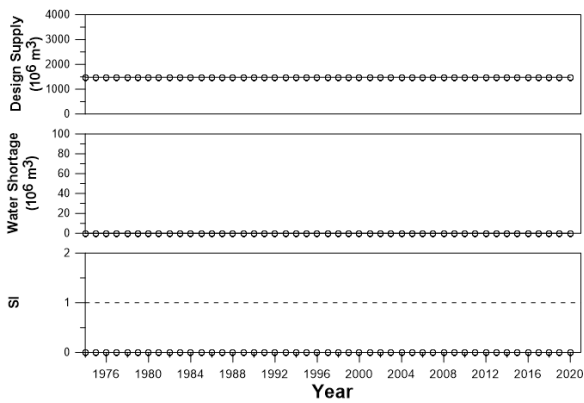


(o)

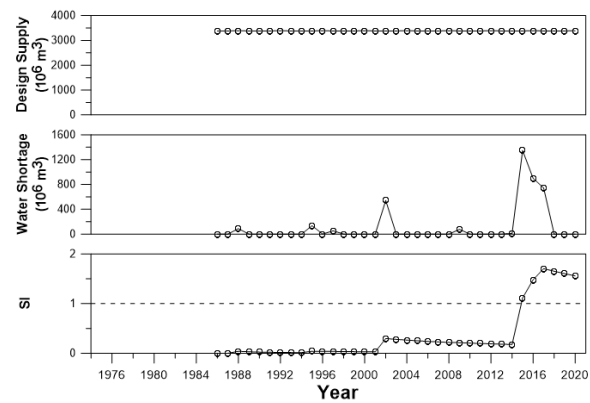


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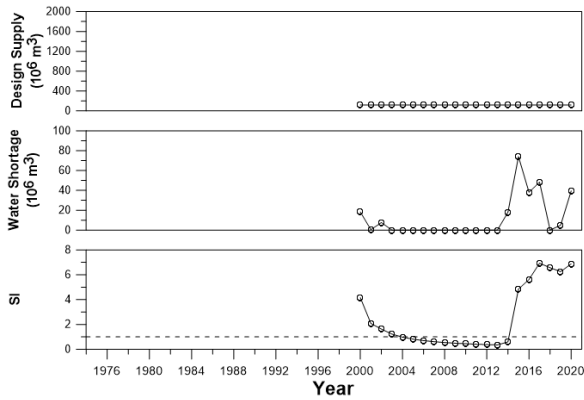
**Figure S1.** Simulation results of multi-purpose dams in Korea: (a) Soygang Dam; (b) Chungju Dam; (c) Heongseong Dam; (d) Andong Dam; (e) Hapcheon Dam; (f) Imha Dam; (g) Namgang Dam; (h) Miryang Dam; (i) Daecheong Dam; (j) Yongdam Dam; (k) Seomjingang Dam; (l) Juam Dam; (m) Juam Controlled Dam; (n) Jangheung Dam; (o) Buan Dam; (p) Boryeong Dam.



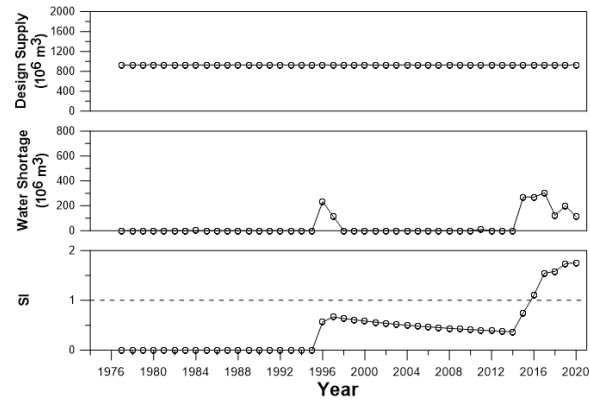
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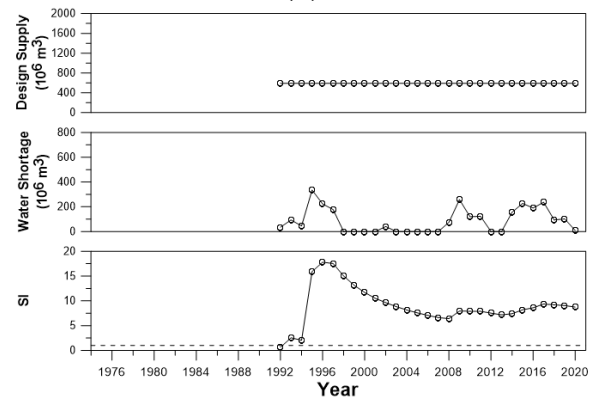
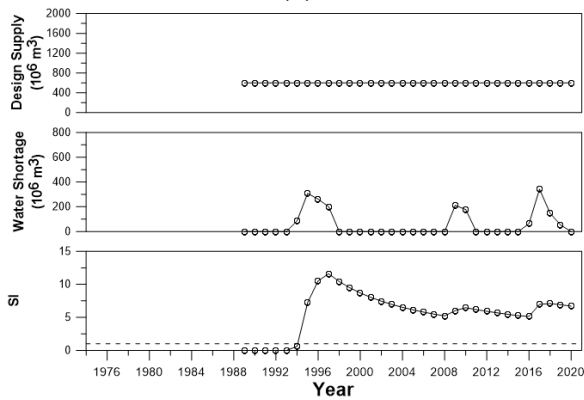
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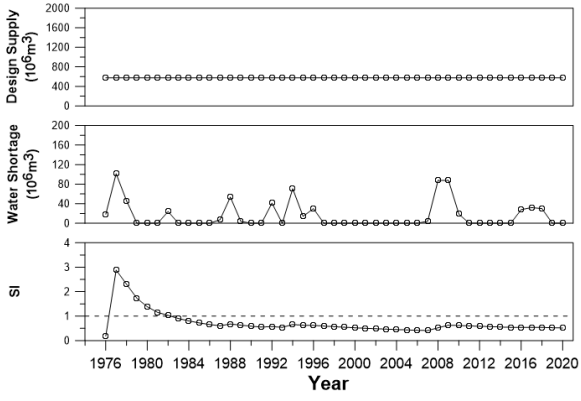
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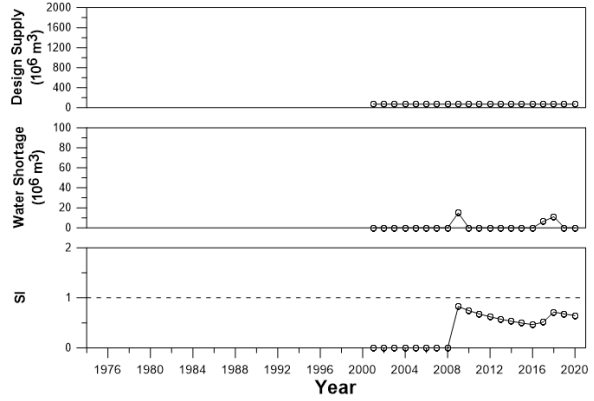
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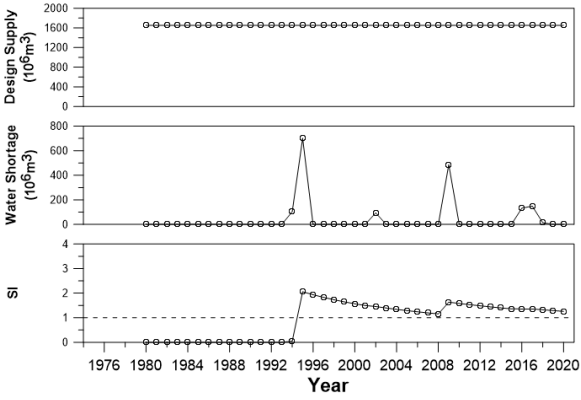
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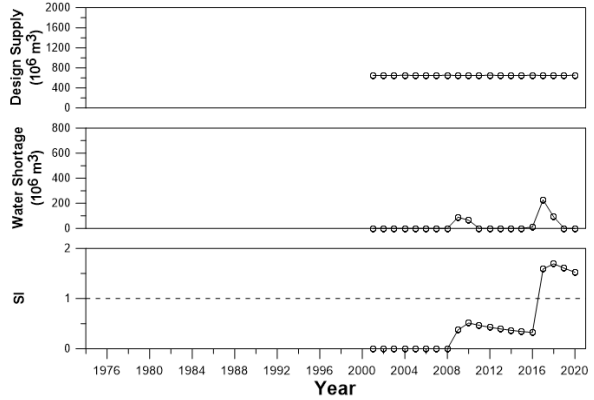
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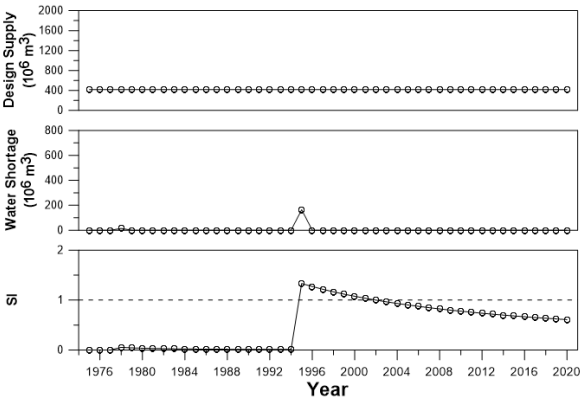
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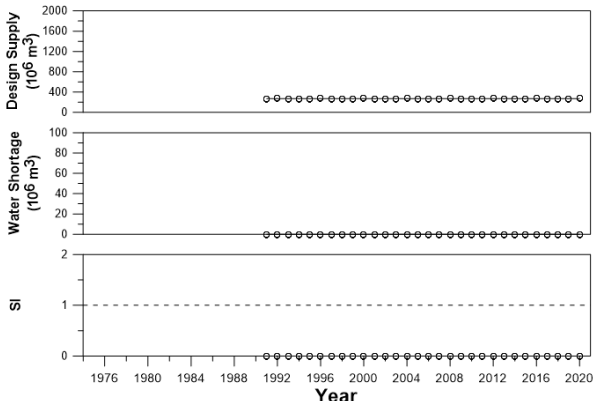
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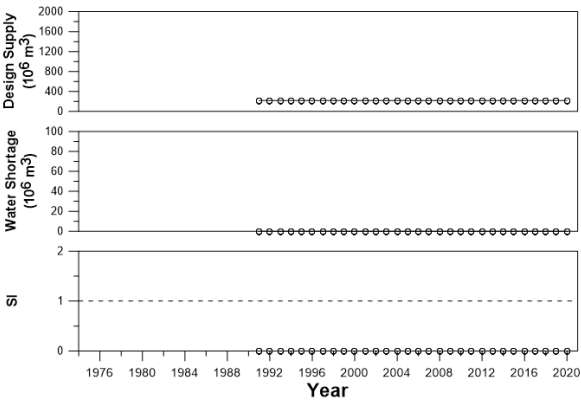
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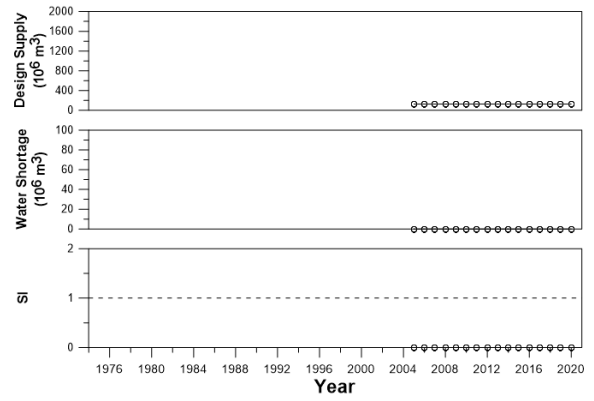
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(k)



(l)

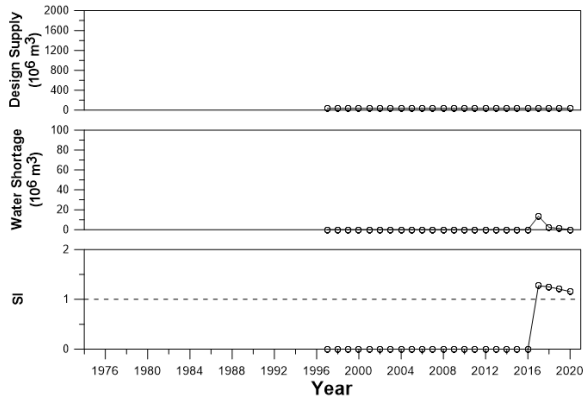


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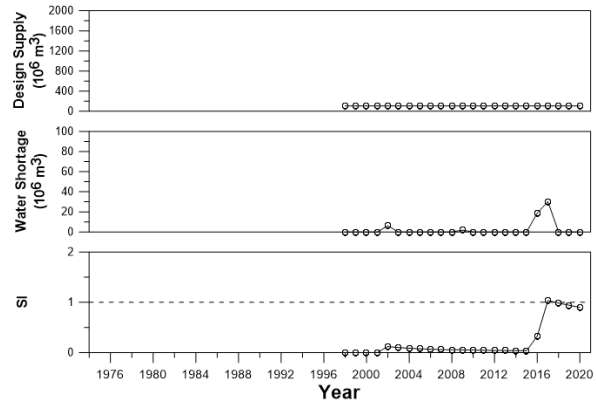


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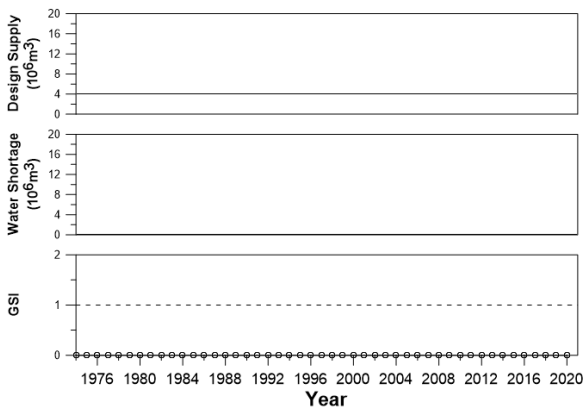


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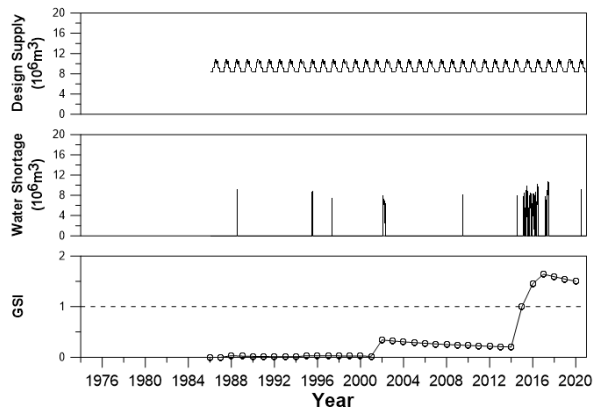


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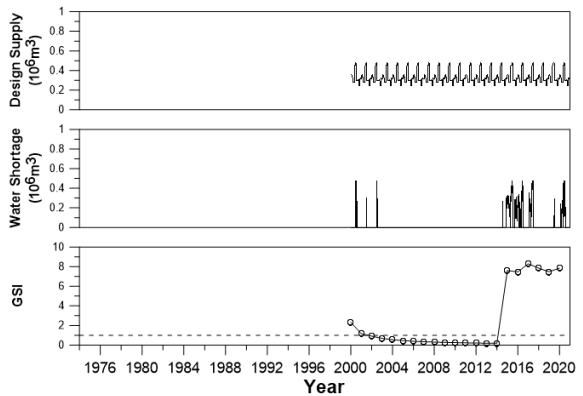
**Figure S2.** Estimation results of *SI* for multi-purpose dams in Korea: (a) Soyanggang Dam; (b) Chungju Dam; (c) Heongsong Dam; (d) Andong Dam; (e) Hapcheon Dam; (f) Imha Dam; (g) Namgang Dam; (h) Miryang Dam; (i) Daecheong Dam; (j) Yongdam Dam; (k) Seomjingang Dam; (l) Juam Dam; (m) Juam Controlled Dam; (n) Jangheung Dam; (o) Buan Dam; (p) Boryeong Dam.



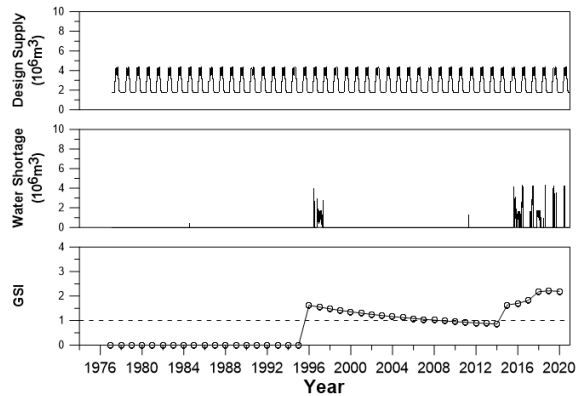
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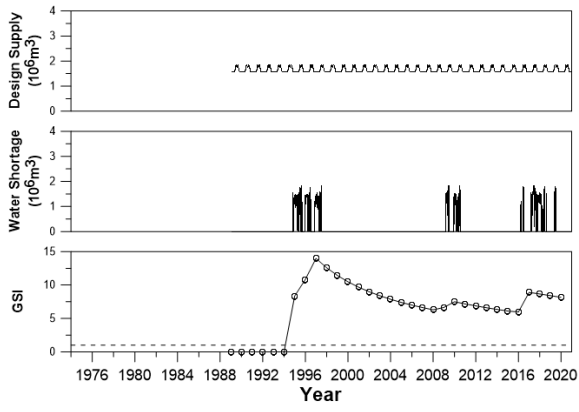
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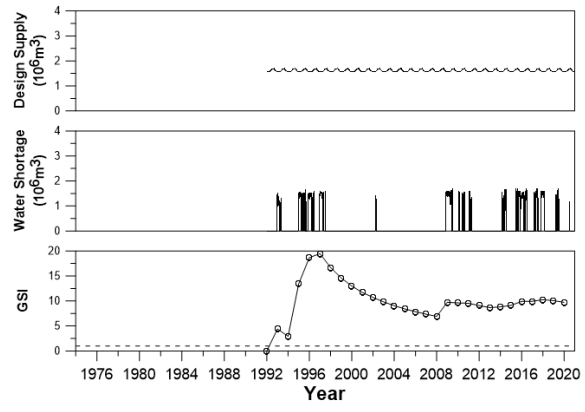
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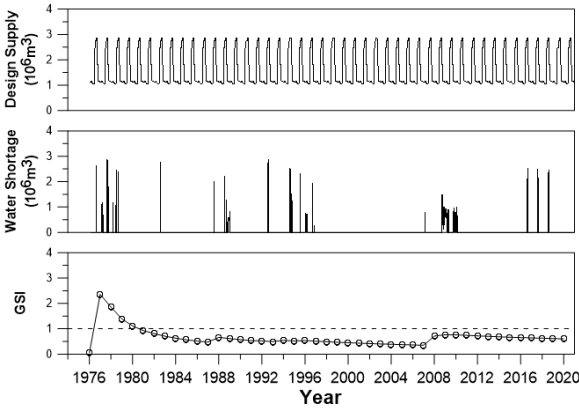
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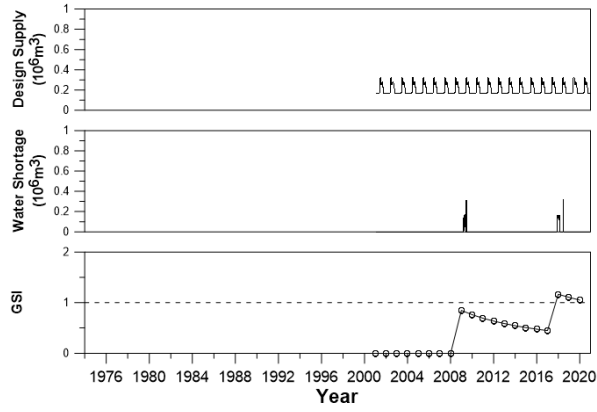
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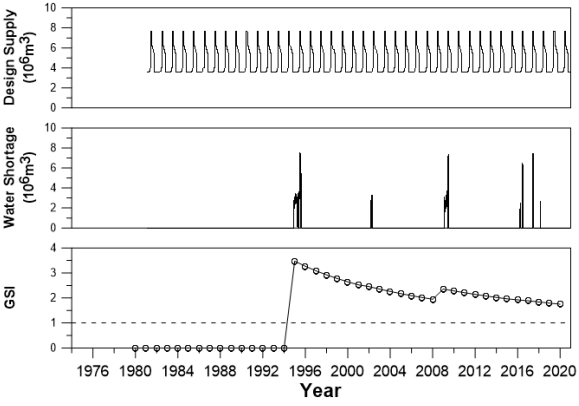
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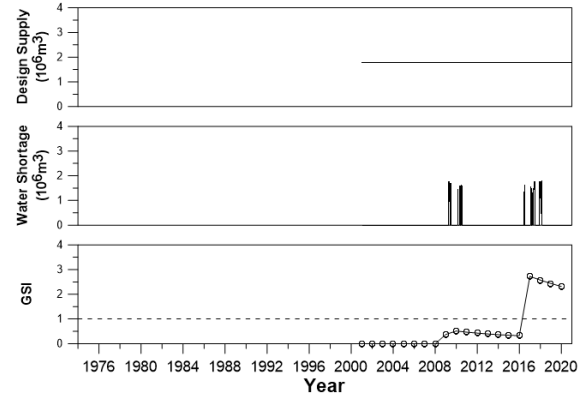
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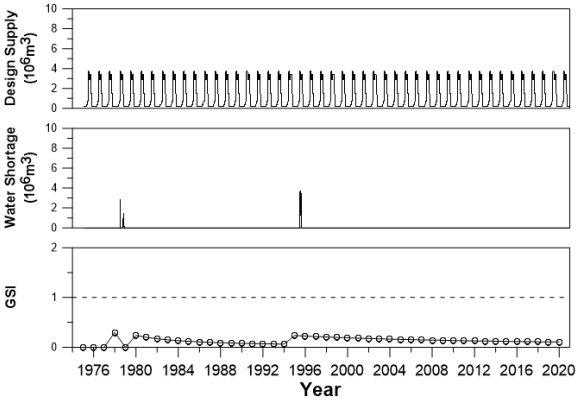
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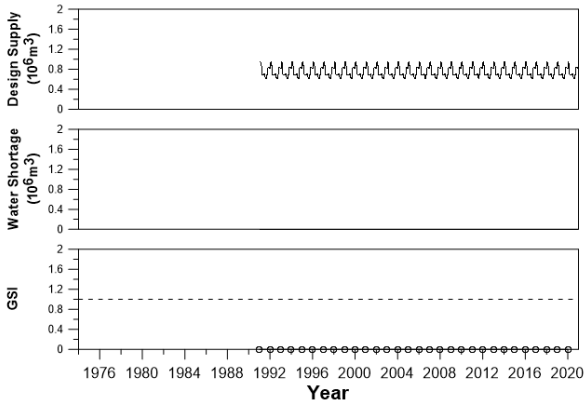
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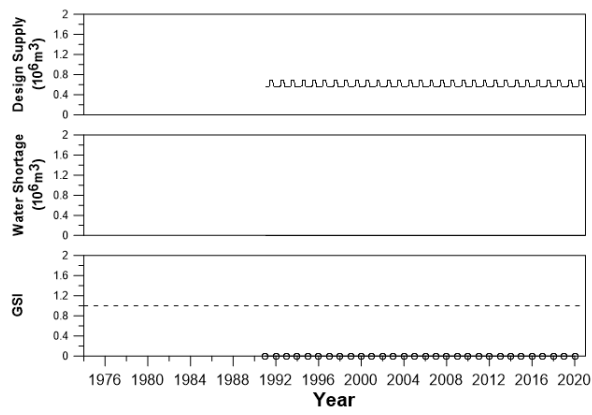
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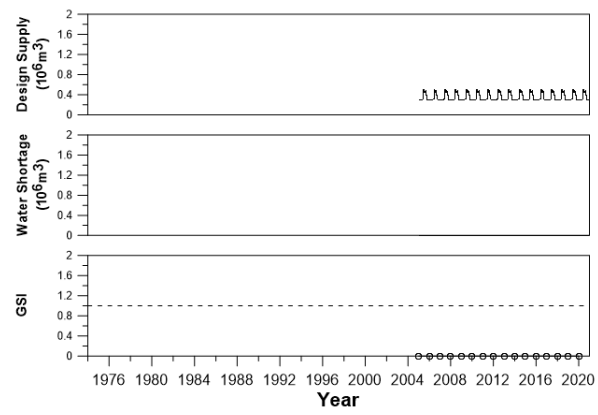
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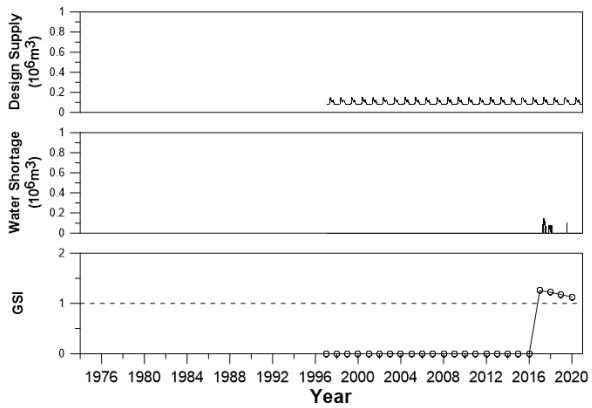
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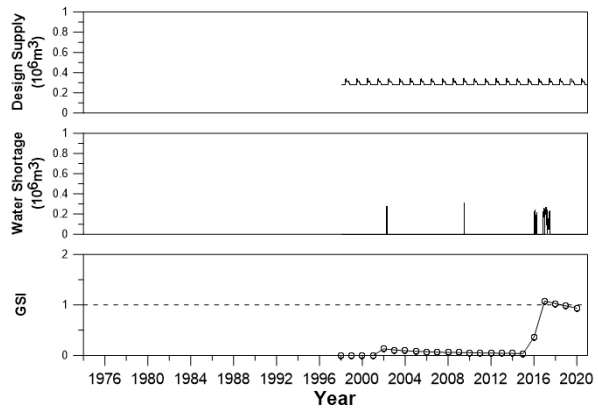
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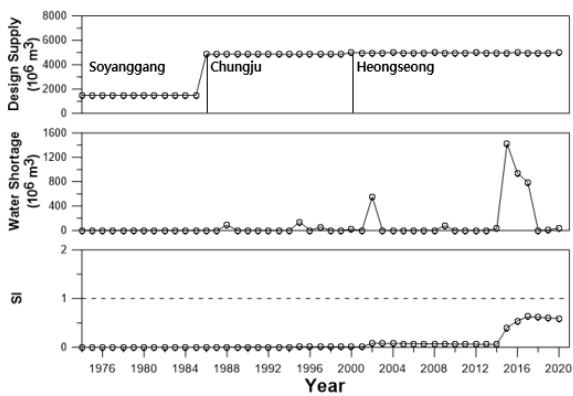


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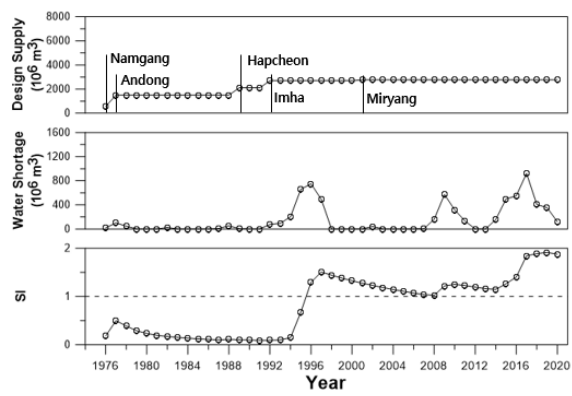


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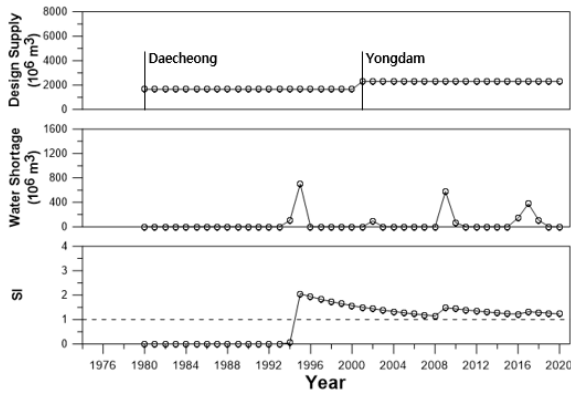
**Figure S3.** Estimation results of GSI for multi-purpose dams in Korea: (a) Soyonggang Dam; (b) Chungju Dam; (c) Heongsong Dam; (d) Andong Dam; (e) Hapcheon Dam; (f) Imha Dam; (g) Namgang Dam; (h) Miryang Dam; (i) Daecheong Dam; (j) Yongdam Dam; (k) Seomjingang Dam; (l) Juam Dam; (m) Juam Controlled Dam; (n) Jangheung Dam; (o) Buan Dam; (p) Boryeong Dam.



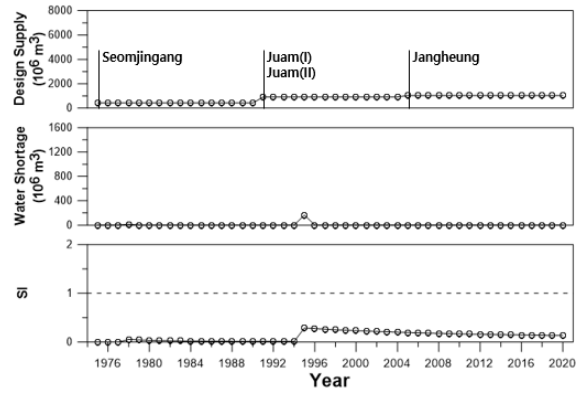
(a)



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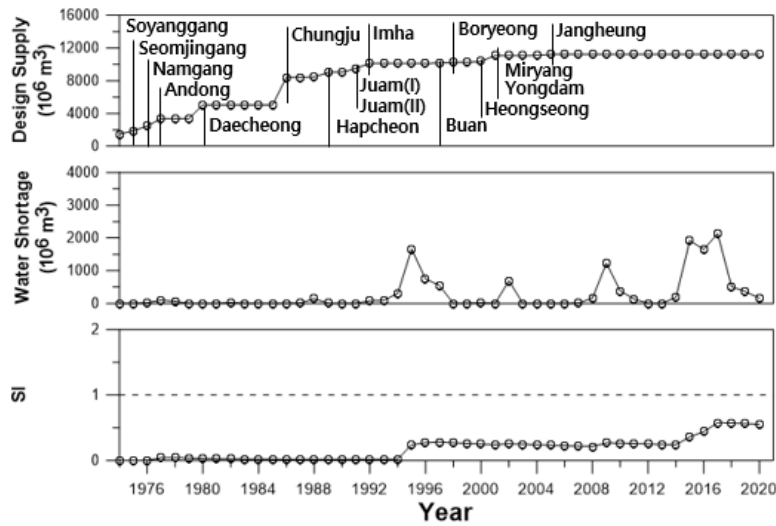


(c)



(d)

**Figure S4.** Estimation results of *SI* for major river basins in Korea: (a) Han River Basin; (b) Nakdong River Basin; (c) Geum River Basin; (d) Seomjin River Basin (Here, Juum (I) and Juum (II) correspond to the Juum Dam and the Juum Controlled Dam, respectively).



**Figure S5.** Estimation results of *SI* for the total river basin in Korea (Here, Juum (I) and Juum (II) correspond to the Juum Dam and the Juum Controlled Dam, respectively).