lack of irrigation water ~~resulting~~, which results in malnutrition (Motoshita, 2008; Pfister et al., 2009), and the other is ~~infection diseases~~infectious disease caused by domestic water scarcity (Motoshita et al., 2011). Food safety policies are crucial for a nation's development~~. The~~ and the food self-sufficiency rate of Taiwan, weighted by energy ~~of Taiwan is~~ , was only 31.7% in 2010 (Council of ~~Agricultural~~Agriculture, 2011). ~~Although in~~Under normal ~~situation~~circumstances, Taiwan's food demand can be satisfied by importation~~. That~~ and this is ~~the~~one way that financial resources ~~can~~may reduce the burden of water scarcity ~~mentioned~~, as described above (Boulay et al., 2011b). However, the instability of ~~the~~ international food ~~price~~prices and potential for natural disaster or war could lead to food crises. The Council of ~~Agricultural~~Agriculture has ~~decided on~~set a target ~~to improve the~~ food self-sufficiency rate ~~to~~of 40% to be achieved by 2020. ~~Therefore~~In the meantime, malnutrition ~~due to~~is a reasonable consequence of lack of irrigation water ~~may occur~~, and this pathway is suitable for estimating the human health impact ~~caused by~~of water ~~consumed~~ ~~(eq~~consumption (equation 2).

$$\Delta HH_{malnutrition,reservoir} = WSI_{reservoir} \times WU_{\%,\,agriculture,\,reservoir} \times HDF_{malnutrition,reservoir} \times WR_{malnutrition}^{-1} \times DF_{malnutrition} \times WU_{consumptive,reservoir} \quad (2)$$

Where ~~Δ~~ $\Delta HH_{malnutrition,reservoir}$ ~~:~~is the damage to human health resulting from malnutrition, measured in disability-adjusted life-years (DALY~~);~~); $WSI_{reservoir}$ ~~:~~is the water stress index of the reservoir; $WU_{\%.\,agriculture,reservoir}$ ~~:~~is the fraction of agriculture water use of the reservoir; $HDF_{malnutrition,\,reservoir}$ ~~:~~is the human development factor, which ~~connect~~connects the human development index (HDI) to malnutrition vulnerability; $WR_{malnutrition}$ ~~:~~is the per capita water ~~requirements~~requirement to prevent malnutrition; $DF_{malnutrition}$ ~~:~~is the damage due to malnutrition (DALY/(yr•capita) ~~);~~and $WU_{consumptive}$ ~~:~~equals blue water consumption (m^3). The detailed ~~calculation~~derivation is available in the supplementary ~~materials~~material.

2.3.2. Damage to ecosystem quality

~~Water withdrawal~~Withdrawal of blue water reduces the availability of green water and may eventually affect vegetation and plant diversity. Following the Eco-~~indicator99~~indicator 99 framework (Goedkoop and Spriensma, 2001), ecosystem damage ~~is~~was assessed ~~with units of~~ using the potentially disappeared fraction (PDF) of species ~~(PDF).~~. While PDF ~~is~~was measured by vascular plant species biodiversity (~~VBPD~~VPBD), a high ~~relationship~~correlation between net primary production (NPP)

註解 [Editor1]:
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Life Sciences
Agricultural Sciences
Sample of work

註解 [Editor2]:

CHECK: Is this correct? “Agricultural” is an adjective; “Council of Agriculture” or “Council of Agricultural X” would be correct.

註解 [Editor3]:

CHECK: Please verify that this retains your intended meaning. The preceding paragraph argues that food crises may occur, not that malnutrition is suitable for estimating the human health impact of water consumption; "therefore" is slightly awkward.

註解 [Editor4]:

CHECK: Should this be ‘/’? ‘/” roughly corresponds to ‘per’. Mathematically, they are equivalent units.

and VPBD has been ~~showed~~shown (Pfister et al., 2009). ~~Recent~~A recent study has also ~~shown the~~demonstrated NPP reduction due to dam construction (Xu et al., 2011). Thus, NPP ~~is~~was chosen as a proxy for ecosystem quality (~~eq~~equation 3)

$$\Delta EQ = CF_{EQ} \cdot WU_{consumptive} = \frac{NPP_{wat\text{-}lim}}{P} \cdot WU_{consumptive} \quad (3)$$

Where ΔEQ ecosystem~~:~~ is the damage factor (m^2•year/~~-~~m^3~~) ;~~): $NPP_{wat\text{-}lim}$ ~~:~~is the NPP limited by water availability, which represents the vulnerability of an ecosystem ~~caused by~~to water shortage~~–~~; P~~:~~ is the mean monthly rainfall (m/month~~).~~) and $WU_{consumptive}$ equals blue water consumption (m^3)

2.3.3. Damage to resources

When the extraction rate of a resource is higher than its regeneration rate, abiotic resource depletion will occur~~, which~~ and future ~~generation~~generations will need "surplus energy" to obtain ~~the~~that resource. ~~Here~~In this study, seawater desalination ~~is~~was regarded as a possible ~~back up~~reserve technology for freshwater depletion~~.~~ (equation 4).

$$\Delta R = E_{desalination} \cdot F_{depletion} \cdot WU_{consumptive} \quad (4)$$

Where ΔR~~:~~ is the damage to freshwater resources (MJ~~);~~), $E_{desalination}$~~:~~ is the energy required for seawater desalination (MJ/m^3~~);~~) and $F_{depletion}$~~:~~ is the fraction of freshwater consumption contributing to depletion. $F_{depletion}$ is dependent on WTA ratios as in ~~(eq~~equation 5~~)~~.

註解 [Editor5]:

CHECK: What is CF_{EQ}? Also, please put spaces on either side of the '=' signs to be consistent with the format of other equations.

註解 [Editor6]:

CHECK: Should this be '/'? '/" roughly corresponds to 'per'. Mathematically, they are equivalent units.

註解 [Editor7]:

CHECK: Please verify that you don't mean WSI; Equation 6 is a revised form of this equation, and you use WSI there.