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## Calculation method of the WECC indicators

1. **WRUR:**  $WRUR = TAC / WRQ \times 100\%$   
TAC: Total water consumption,  $m^3$ ; WRQ: Water resources quantity,  $m^3$
2. **WAA:**  $WAA = WA / TA \times 100\%$   
WA: Water area,  $km^2$ ; TA: Total area,  $km^2$
3. **WCGDP:**  $WCGDP = WRQ / GDP$   
WRQ: Water resources quantity,  $m^3$
4. **WRA:** WRA= The number of days during the year that the lake level meets the flood control, water diversion and ecological water level control line, %
5. **PEIRN:**  $PEIRN = PEQ / AVS \times 100\%$ , considering TN and TP  
PEQ: Pollutant emission quantity, ton  
AVS: Added value of sector,  $10^4$  CNY
6. **PEIIL:** PEIIL=The sum of pollutant fluxes in major rivers flowing into the Taihu lake, considering TN and TP, ton
7. **TAPRN:**  $TAPRN = TPQIR / WECR \times 100\%$   
TPQIR: Total pollutant quantity inlets into river, ton  
WECR: Water environmental capacity of the river, ton
8. **WTR:**  $WTR = CWTW / TWD \times 100\%$   
CWTW: Centralized wastewater treatment volume, ton  
TWD: Total wastewater discharge, ton
9. **LUP:**  $LUP = UGA / TUA \times 100\%$   
UGA: Urban green area,  $km^2$   
TUA: Total urban area,  $km^2$
10. **SDR:**  $SDR = ESRL / TLRS \times 100\%$   
ESRL: Ecological shoreline of river length, km  
TLRS: Total length of river shoreline, km
11. **WCF:**  $WCF = SCII \times RWCFAC$   
SCII: Soil canopy interception index  
RWCFAC: Regional water conservation function adjustment coefficient

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12. **RRF:**  $RRF = (100 - RRC) \times AC$   
RRC: Runoff regulation coefficient  
AC: Adjustment coefficient
13. **WPF:**  $WPF = SR \times CC \times CA \times AC$ , considering TN and TP  
SR: The concentration difference of streamflow and rainfall, %  
CC: Catchment capacity,  $t \cdot hm^2$   
CA: Catchment area,  $km^2$   
AC: Adjustment coefficient
14. **EASP:**  $EASP = 0$ , if the damaging business activities exist within the ecological zone;  
 $EASP = 60$ , if the non-hazardous construction activities in the ecological zone;  $EASP = 100$ , No human activities in the ecological zone, non-dimensional
15. **RNWQ:**  $RNWQ =$  Proportion of water functional areas with regional water quality standards, considering TN and TP, %
16. **EXWQ:**  $EXWQ = 0$ , if the outbound water quality is worse than inbound;  $EXWQ = 100$ , if the outbound water quality is better than inbound. non-dimensional
17. **QMESL:**  $QMESL = (Water\ quality\ monitoring\ value - Water\ quality\ standard\ value) / Water\ quality\ standard\ value$ , non-dimensional
18. **WQOSRL:**  $WQOSRL =$  Water qualification rate of water quality assessment section, %
19. **FGCR:**  $FGCR = (FA + GA) / TA \times 100\%$   
FA: forestland area,  $km^2$   
GA: Grassland area,  $km^2$   
TA: Total area,  $km^2$
20. **WVCR:**  $WVCR = WAW / WA \times 100\%$   
WAW: Vegetation area in wetland,  $km^2$   
WA: Wetland area,  $km^2$
21. **SPC:**  $SPC = SPA / TWA \times 100\%$   
SPA: Submerged plant area in water area,  $km^2$   
TWA: Total water area,  $km^2$
22. **LNSR:**  $LNSR = LNLS / TLLS \times 100\%$   
LNLS: Length of natural lake shoreline, km

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TLLS: Total length of lake shoreline, km

23. **BO:**  $BO=1- NB \times MBA / (365 \times LA)$

NB: Number of blooms

MBA: Maximum bloom area,  $km^2$

LA: Lake area,  $km^2$

24. **ER:**  $ER= WERI / TWEPI \times 100\%$

WERI: Water ecological restoration investment,  $10^4$  CNY

TWEPI: Total water environmental protection investment,  $10^4$  CNY

25. **RC:**  $RC=100-NGD/CL \times 100$

NGD: Number of gates and dams

CL: Channel length, km

26. **GRWDEM :** GRWDEM=100, Reaching the target ecosystem water demand ;  
GRWDEM=60, Reaching the target ecosystem water demand; GRWDEM=0, Basic  
ecological water demand cannot be met.