



# Thailand

## Implementing **AWDO** Framework to Mainstreaming Water Security Strategy into National Water Strategy

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1. National water strategy and national water master plan
2. Research on water security assessment in Thailand
3. Project on monitoring & evaluation of national water master plan
4. Linkage of water security index and development indicator

# 1<sup>st</sup> level: National strategy 20 years (2018-2037)

## Thailand's Vision (2037)

Thailand to become

“a developed country with security, prosperity and sustainability in accordance with the Sufficiency Economy Philosophy”



### Security

- The nation enjoys solidarity and is resilient to both internal and external threats and changes, with established social, economic, environmental, and political security.
- National sovereignty is secured.
- People live in harmony and unity. Their lives are secured in terms of occupations, income, housing, as well as safety of life and property.
- The country has food, energy, and water resources security.



### Prosperity

- The country enjoys constant economic growth and becomes a high-income economy with decreased development disparity. Citizens benefit from development on an equal basis.
- The country has considerable economic competitive capacity and develops its economy and society of the future to promote regional connectivity in terms of transport and logistics, production, trading, and investment.
- The country has all of the necessary capital for continuous development including human capital, intellectual capital, financial capital, and so forth.



### Sustainability

- Development should promote constant growth in terms of people's income and quality of life in an eco-friendly manner without exploitation of natural resources.
- Production and consumption are conducted on an environmentally-friendly basis and in line with regulations recognized by the global community.
- People embrace social responsibility with a focus on sustainable public interest. All sectors uphold and follow the Sufficiency Economy Philosophy.



# 2<sup>nd</sup> level: Master plans under national strategy (2018-2037)

Office of the National Economic and Social Development (NESDB)



## 23 master plans

1. Security
2. Foreign issue
3. Agriculture
4. Manufacturing
5. Tourism
6. City
7. Logistic and digital
8. Business
9. Sufficiency economy
10. Culture
11. Lifelong learning
12. Education
13. Mental issue
14. Sport
15. Social power
16. Local business
17. Social welfare
18. Sustainable development
- 19. Water management**
20. Government
21. Corruption issue
22. Laws
23. Innovation

# 6 water issues

1. Water for domestic
2. Water for production
3. Flood management
4. Water quality
5. Upstream conservation: forest
6. Water management





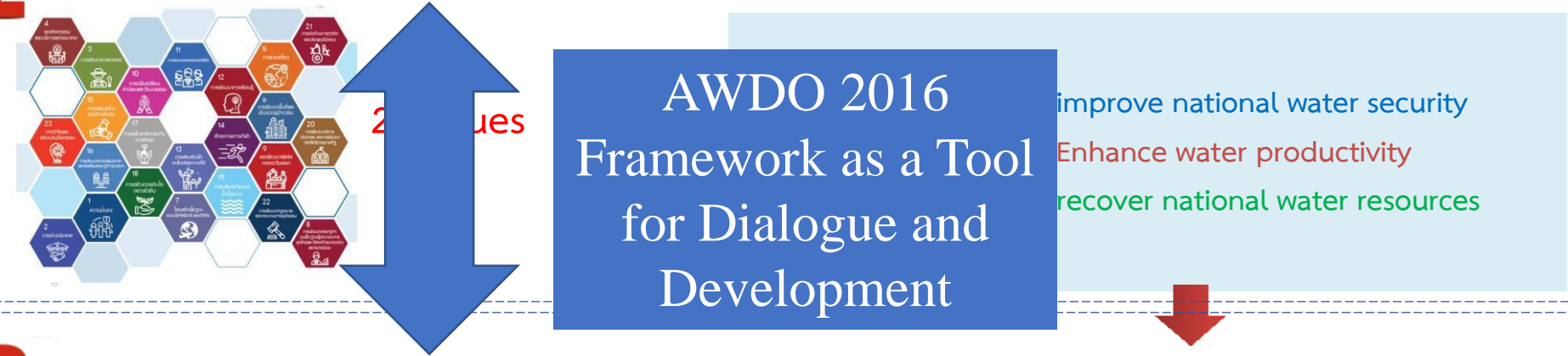
- Dr. Sucharit Koontanakulvong (2013): R&D on water security index at provincial and basin scales of Thailand
- Dr. Piyatida Ruangrassamee (2018-2019): update R&D on water security assessment at provincial and basin scales of Thailand
- Dr. Pongsak Suttinon (2019): mainstream water security index into national water strategy and master plan (cooperation with Office of National Water Resources) “Project on monitoring & evaluation of national water master plan”

# Linkage of Water Security Strategy in Thailand Master Plans

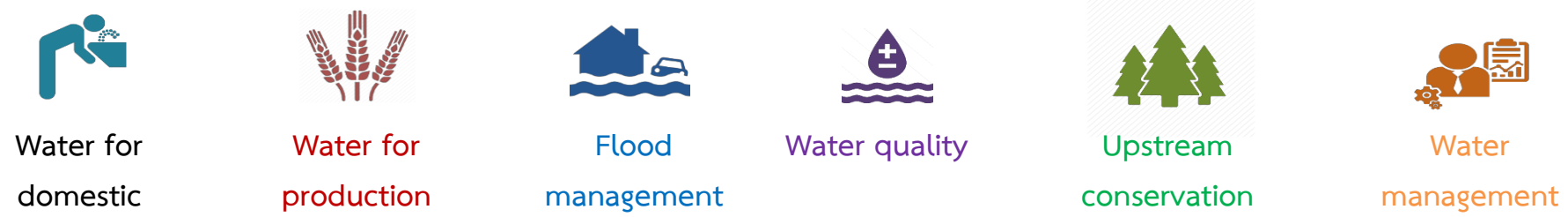
## 1 National strategy 20 years (1<sup>st</sup> level) : National development targets



## 2 Master plan under national strategy (2<sup>nd</sup> level) : 19<sup>th</sup> issue: water management

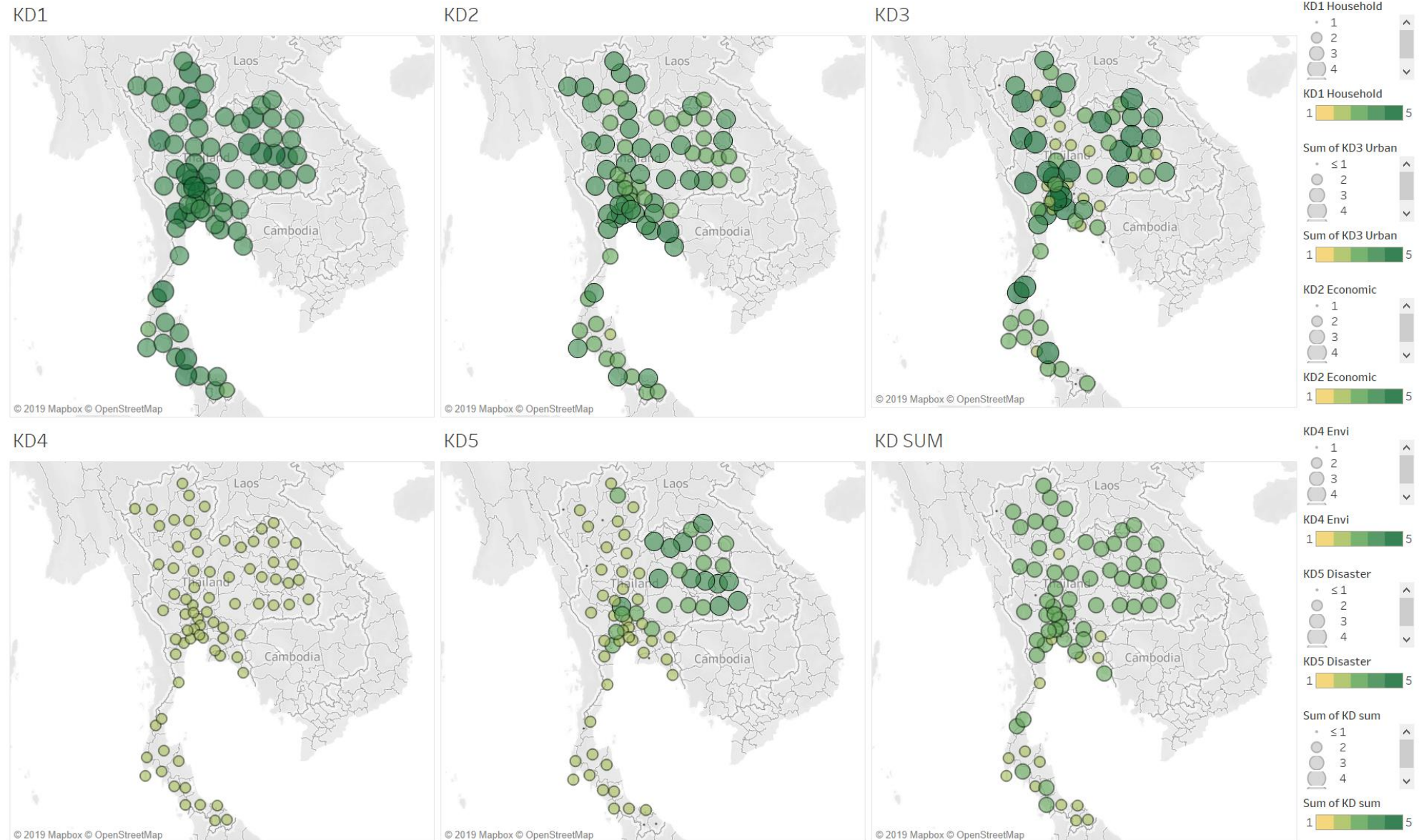


## 3 Master plan on water resources management (3<sup>rd</sup> level) : To support the 2<sup>nd</sup> level



# Adapting AWDO 2016 Framework for Provincial Water Security Assessment

Ruangrassamee et al., 2019





# Monitoring & Evaluation of National Water Master Plan



Input: data from each water-related agency, strategy, water master plan, SDG, index

## Process: Theory of Change

Input → Output

Intermediate Outcome

Long-term Outcome

Impact

1. Relevance

Water investment project  
Each project of each  
agency

3<sup>rd</sup> level  
Master plan on water  
resources management

2. Effectiveness

3. Efficiency

2<sup>nd</sup> level

19<sup>th</sup> issue: water master plans  
under national strategy

1<sup>st</sup> level

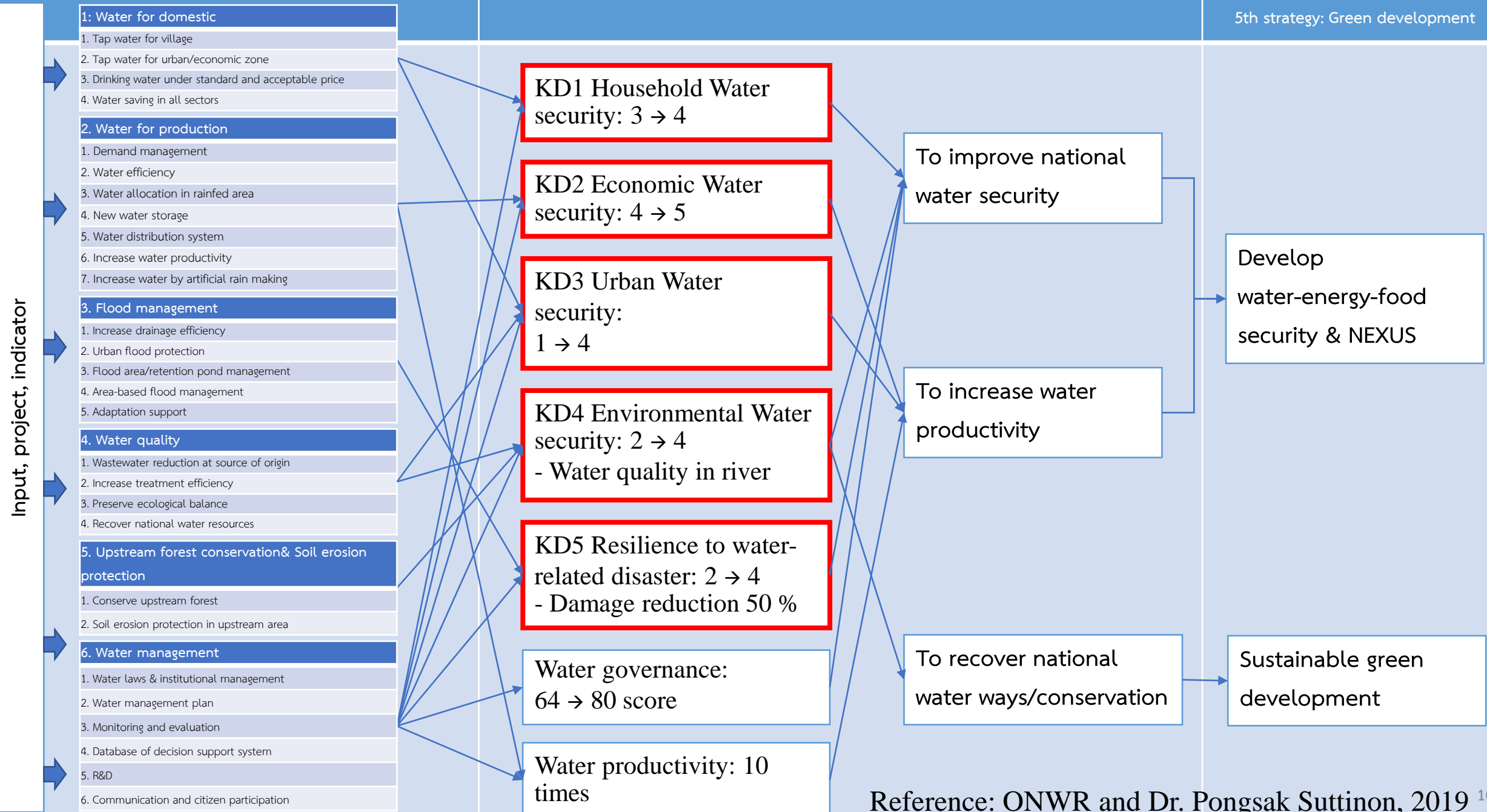
National strategy 20 yrs.  
5<sup>th</sup> strategy:  
Green development

SDG

4. Impact

Reference: ONWR and Dr. Pongsak Suttinon, 2019

Output: M&E results, recommendations



# Acknowledgement & Next Steps



Policy evaluation by Office of the National Economic and Social Development (AWDO + Water Productivity + Water Governance)

Monitoring & Evaluation of National Water Resources Projects by Office of the National Water Resources

OECD: Water Governance in AWDO 2020

OECD: Water Finance in AWDO 2020

IWC, Australia: Environmental Water Security

## Water Security Workshop in Bangkok on 19 August 2019

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- Office of the National Economic and Social Development (NESDB), **National Strategy (2018-2037)**
- Office of the National Water Resources (ONWR), **Master Plan on Water Resources Management (2018-2037)**
- ADB (2016), **Asian Water Development Outlook 2016**
- OECD (2015), **OECD Principles on Water Governance**
- Koontanakulvong S. and C. Suthidhummajit (April, 2019), Technical report of **water productivity** under “Research Project on “Analysis of water security, water productivity and water-related disaster for water resources master plan”, supported by Thailand Science Research and Innovation (TSRI)
- Ruangrassamee et al. (2019), **Research Project on “Analysis of water security, water productivity and water-related disaster for water resources master plan”, supported by Thailand Science Research and Innovation (TSRI)**
- Suttinon P. (2019), Inception report on **monitoring & evaluation of national water master plan**, supported by Office of the National Water Resources