Water Demand in Saskatchewan

Presentation to the SIA

April 12 2018

Cecil Nagy Msc.

Department of Agriculture and Resource Economics

Present and Future Water Demand Study

Kulshreshtha, Bogdan & Nagy

- Quantified the Demand within the 11 water Basins in Saskatchewan
- 2010 Actual/Estimated using coefficients
- Forecast to 2040 and 2060
- Baseline Scenario (Economic Trends, Population)
- Climate Change Scenario
- Water Conservation Scenario (Technology/adoption)
- https://www.wsask.ca/Water-Info/Water-Demand-Study/

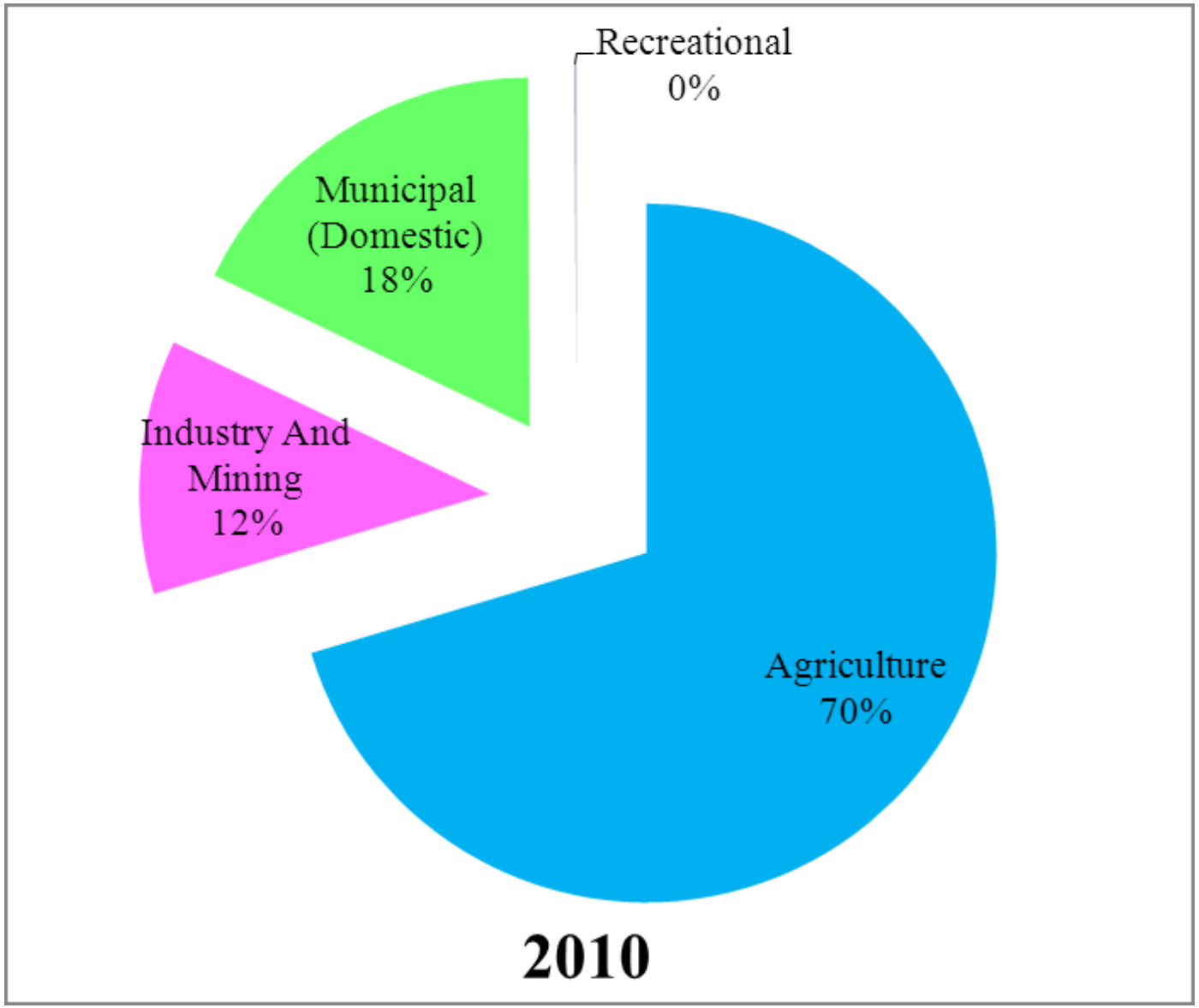
Indirect Water Demand (78.7% of demand)

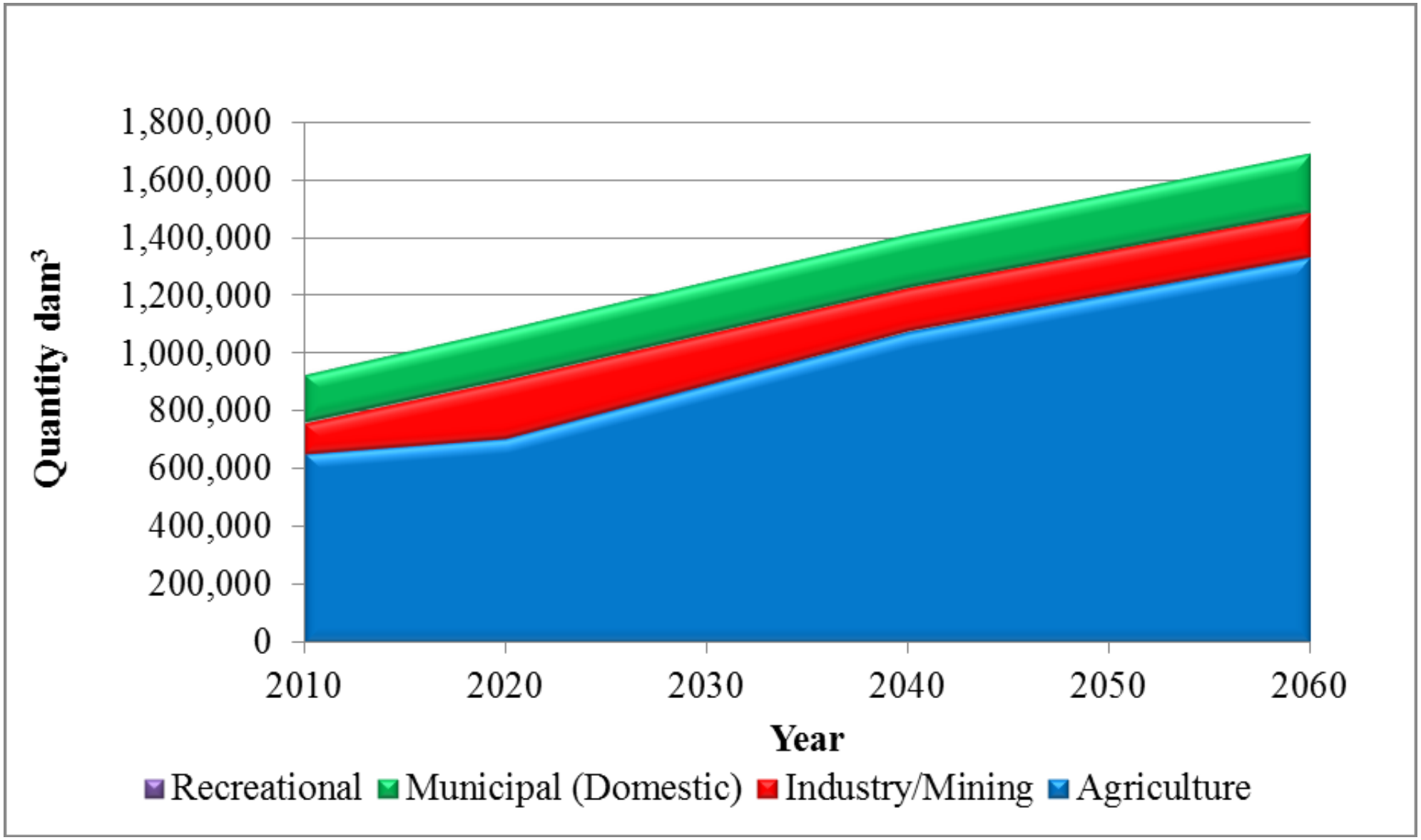
- Evaporation (98%)
- Trans-boundary agreements
- Instream water flow needs
- Environmental Protection/preservation projects

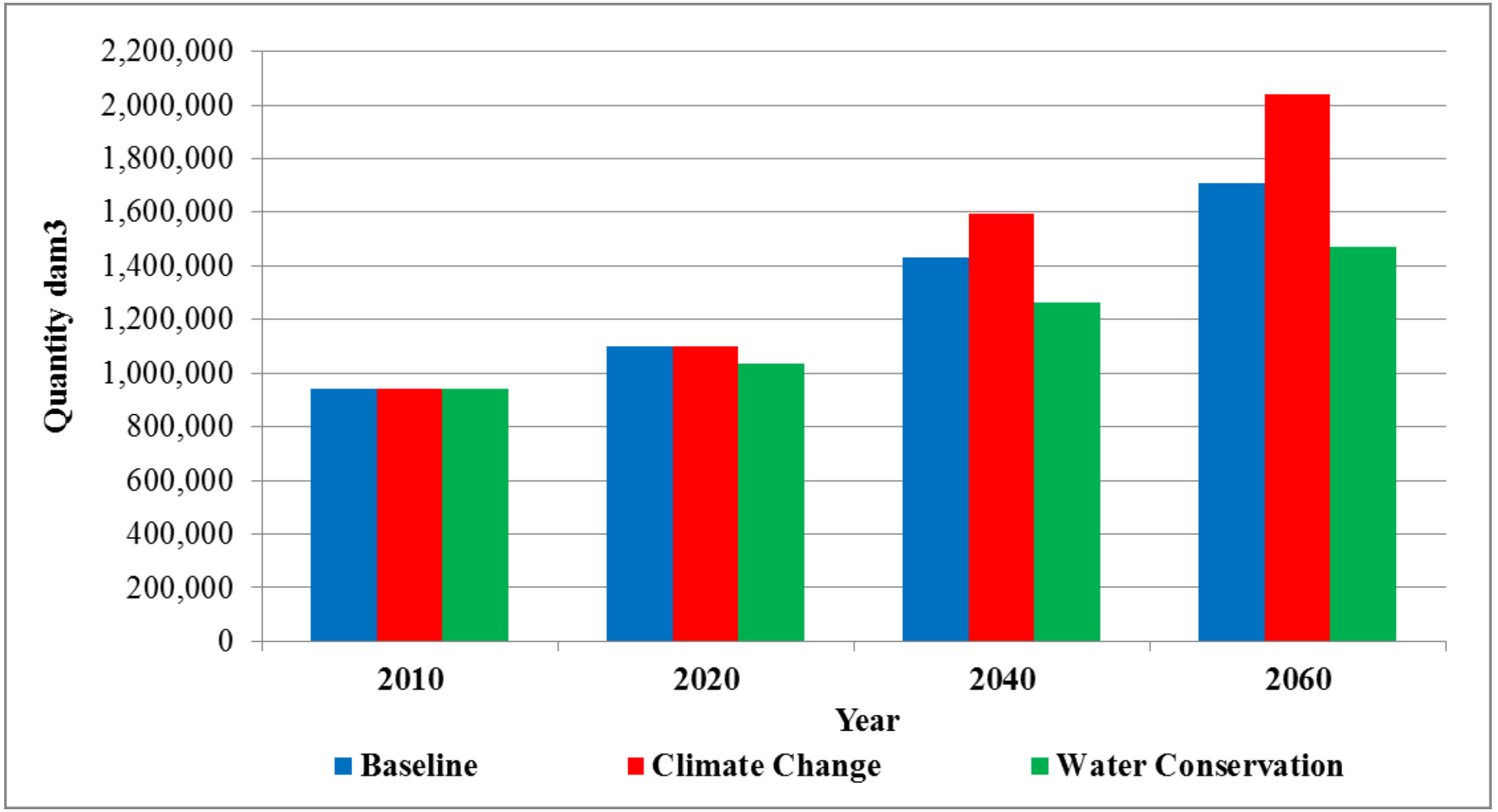
Socio-Economic Demand (22.2% 2010)

Production of goods and services

- Agriculture Sector (Livestock 6.5% and Irrigation 93%)
- Mining/Industrial Sector (Potash/ Manufacturing/Oil and Gas)
- Municipal/Domestic Sector
- Recreation Sector


Recreational
0%
Municipal
(Domestic)
18%
Industry And
Mining
12%
Agriculture
70%
2010


1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Quantity dam³
2010
2020
2030
2040
2050
2060
Year
Recreational
Municipal (Domestic)
Industry/Mining
Agriculture


2,200,000
2,000,000
1,800,000
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
Quantity dam3
2010
2020
2040
2060
Year
Baseline
Climate Change
Water Conservation

Conclusions

- Water Basin Supply (surface and ground water) may limit economic growth within a Basin.
- Impact of Climate Change on water demand?
- Agriculture Water Demand- Irrigation?
- Intensive Livestock Operations?
- How will Saskatchewan allocate water?
- Low rate to meet basic human needs after that highest value use

Thanks!!