Sub-National Estimates of Human Capital Indicators: Localizing Investments for the Demographic Dividend
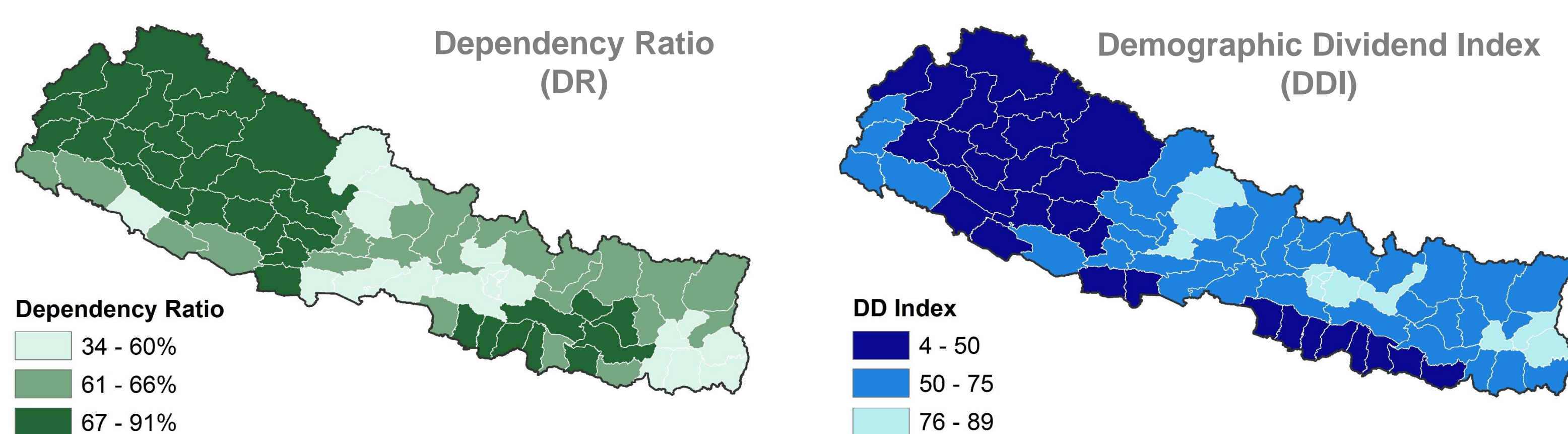
Low fertility and Population Momentum Shape Population Dynamics in Nepal

The demographic dividend is the accelerated development that can arise when a population has a relatively large proportion of working-age people coupled with effective human capital investment. We measure human capital needs at national and sub-national level using a "demographic dividend index" (DDI). We map dependency ratios and human capital indicators in empowerment, education and employment for all districts in Nepal and identify priority areas for investments to enhance prospects for a demographic dividend.
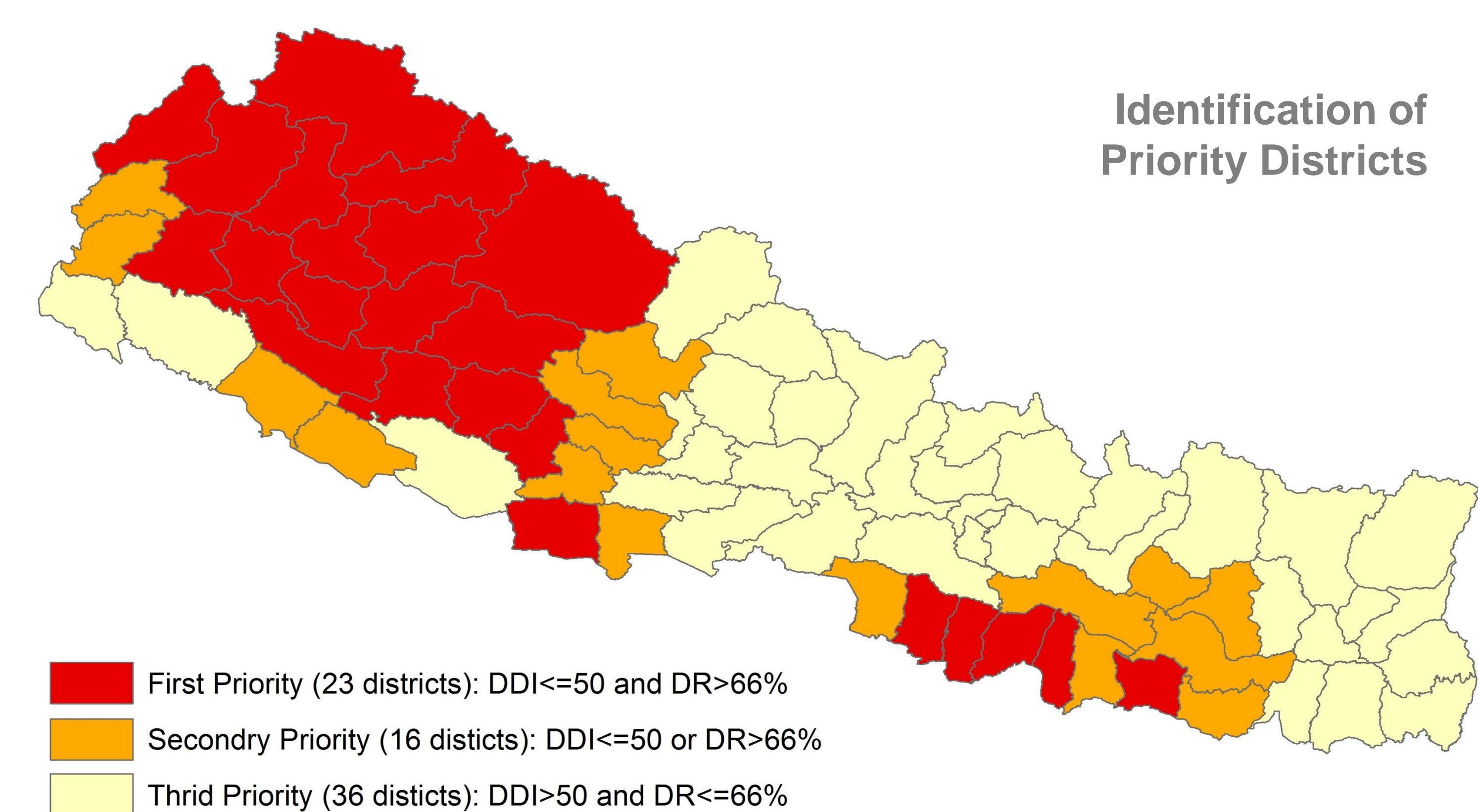

Nepal Age Structure and Dependency Ratio

Dependency ratio in 2015: 62%

0-14 15-24 25-64 65+ Dependency Ratio

(Source: UNDESA (2015). World Population Prospects)
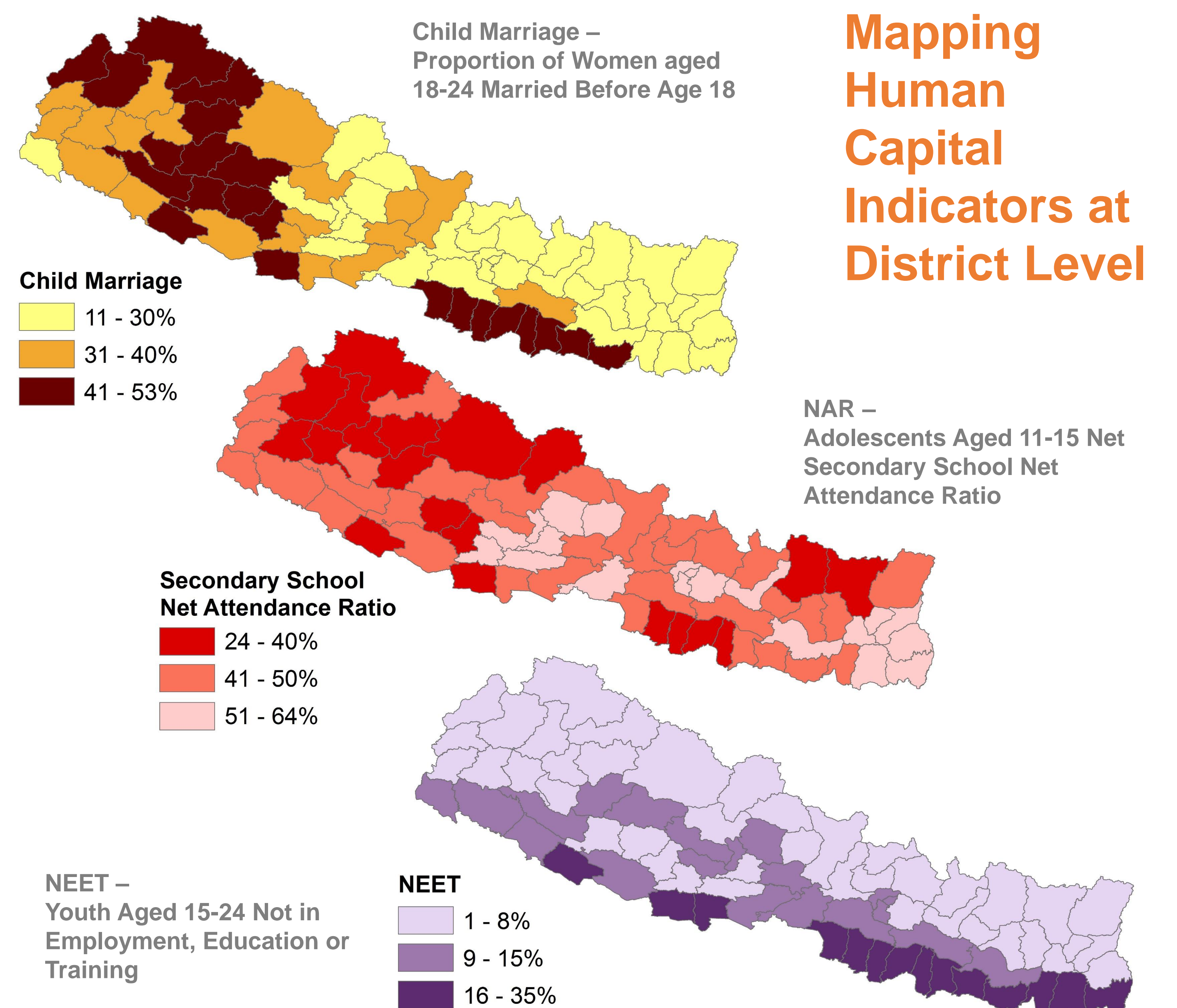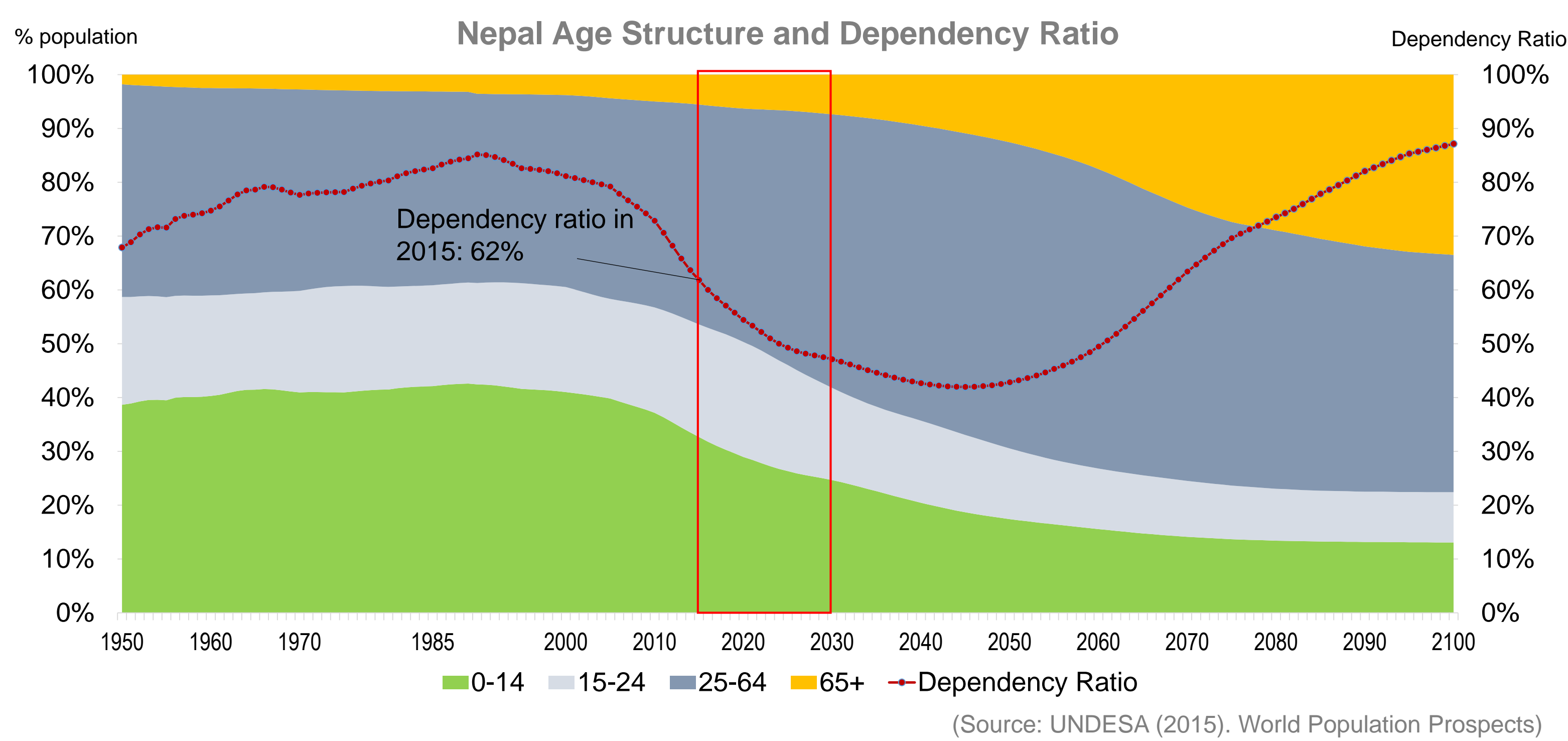
Identifying Priority Districts

Dependency Ratio (DR)

Dependency Ratio
34 - 60%
61 - 66%
67 - 91%

Demographic Dividend Index (DDI)

DD Index
4 - 50
50 - 75
76 - 89

Priority Groups based on DDI and Dependency ratio

	Number of Districts		
	DR<=66	DR>66	Total
DDI<=0.50	6	23	29
DDI>0.50	36	10	46
Total	42	33	75

1st priority: 23 districts with high dependency ratios and low scores for the DDI, where high priority should be given to providing sexual and reproductive health services (including contraception), leaving no one out of school, and ensuring access to decent work.
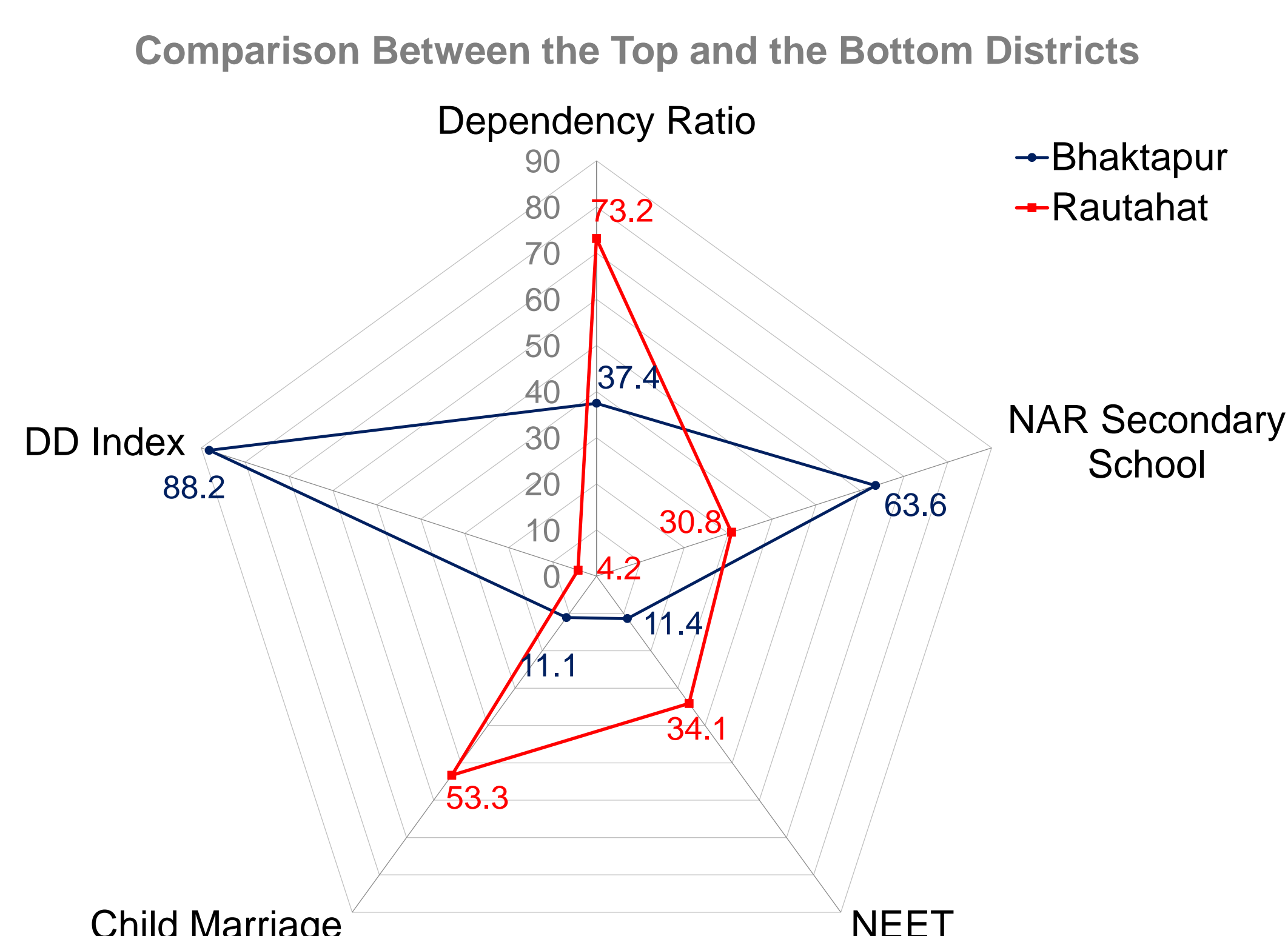
2nd priority: districts with high dependency ratios or low scores for DDI (10 and 6 districts respectively), where policies and interventions should be reviewed with attention to local human capital indicators.

3rd priority: for 36 districts with relatively high dependency ratios and scores for DDI, there are still opportunities to maximize investments and benefits in education, employment and human rights.

Identification of Priority Districts

First Priority (23 districts): DDI<=50 and DR>66%
Secondry Priority (16 districts): DDI<=50 or DR>66%
Thrid Priority (36 districts): DDI>50 and DR<=66%

Comparing Indicators for Policy and Programming

The radar chart shows the best and worst performing districts in five dimensions. Two completely different realities. They also show clear opportunities for improving human capital indicators.

Comparison Between the Top and the Bottom Districts

Bhaktapur
Rautahat

Dependency Ratio 73.2, 37.4
DD Index 88.2, 4.2
NAR Secondary School 63.6, 30.8
11.4
11.1, 34.1
Child Marriage 53.3
NEET

Mapping Human Capital Indicators at District Level

Child Marriage – Proportion of Women aged 18-24 Married Before Age 18

Child Marriage
11 - 30%
31 - 40%
41 - 53%

NAR – Adolescents Aged 11-15 Net Secondary School Net Attendance Ratio

Secondary School Net Attendance Ratio
24 - 40%
41 - 50%
51 - 64%

NEET – Youth Aged 15-24 Not in Employment, Education or Training

NEET
1 - 8%
9 - 15%
16 - 35%

Projections to Year 2030 – Scenario Analysis

- In the Constant scenario (K) we maintain the observed situation in 2011 during the period 2015-2030.
- In Scenario A (SA), each district will reach, by 2020, the 2011 situation observed for the best district.
- In Scenario B (SB), we project, between 2015 and 2030, a 100% change in each indicator from the values observed in 2011.
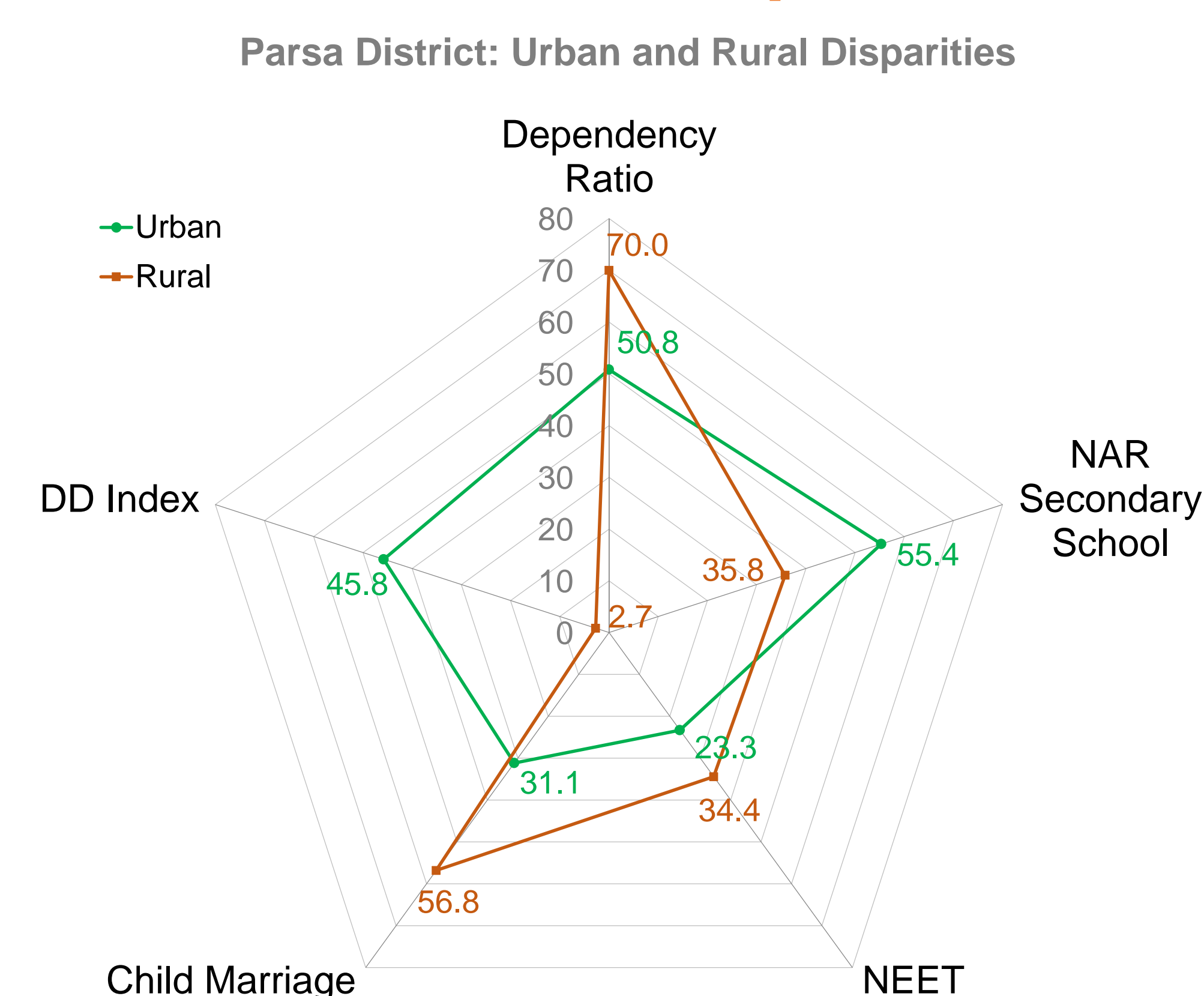
Three Scenarios: Setting Targets for Each indicators

Empowerment: Marriage/union before age 18 among women aged 18-24			
	2015	2020	2030
K (31.7)	651,464	689,359	612,278
SA(11.1)	--	242,503	--
SB(15.9)	--	--	193,242
Benefits	--	446,856	419,036
Education: Secondary school participation (%) among people aged 11-15			
	2015	2020	2030
K (45.3)	1,846,764	1,740,043	1,522,525
SA(63.6)	--	1,158,649	--
SB(80.0)	--	--	557,038
Benefits	--	581,394	965,487
Employment: People aged 15-24 not in employment, education or training (%)			
	2015	2020	2030
K (15.2)	906,830	980,668	862,431
SA(11.4)	--	735,332	--
SB(7.5)	--	--	425,494
Benefits	--	245,336	436,937

Empowerment

With Constant scenario (K), the number of girls who will marry before age 18 will be 689,359 by 2020, yet with Scenario A (SA) the number would decrease to 242,513. With Scenario B (SB) in which child marriage is reduced by half that observed in 2011, the number would decrease to 193,242 by 2030, benefiting 419,036 girls.

Urban and Rural Disparities

Parsa District: Urban and Rural Disparities

Urban
Rural

Dependency Ratio 70.0, 50.8
NAR Secondary School 35.8, 55.4
DD Index 45.8, 2.7
NEET 23.3, 34.4
Child Marriage 31.1, 56.8

The urban population has a higher school attendance rate, lower child marriage rate and lower % of youth in NEET. This is illustrated with data from Parsa District.

Gender Inequality

In both urban and rural areas, we observe disparities between men and women classified as NEET. In rural area, the proportion of men who are NEET is 6.5%, while 22.4% for women.

While women who are NEET spend much their time (10 months of 12) in household work, their male counterparts distribute their time more evenly across distinct activities

Employment Status between Men and Women Aged 15-24

Mean number of months for people who are NEET	Men	Women
Seeking job	3.2	0.2
Household work	3.2	10.1
No work	4.8	1.1

Employed: 33.4 (Male), 25.7 (Female)
In school: 56.6 (Male), 44.6 (Female)
NEET: 6.3 (Male), 22.9 (Female)
Alternate: 3.6 (Male), 6.8 (Female)

Male Female