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LAMPIRAN 1

BIAYA PENELITIAN DAN PENYUSUNAN TESIS

1.	**Transportasi :**		
	Lokal Surabaya, selama penelitian		Rp. 1.500.000,-
		Jumlah :	Rp. 1.500.000,-
2.	**Perangkat Penelitian :**		
	Foto copy data kepustakaan dll.		Rp. 1.250.000,-
		Jumlah :	Rp. 1.250.000,-
3.	**Penyusunan Laporan :**		
	Alat tulis dan kertas		Rp. 500.000,-
	Copy literatur/referensi lainnya		Rp. 1.500.000,-
	Penggandaan laporan 5 rangkap @ Rp. 150.000,-		Rp. 750.000,-
		Jumlah :	Rp. 2.750.000,-
4.	**Seminar Hasil Ujian :**		
	Seminar Proposal		Rp. 250.000,-
	- Konsumsi		
	- Foto copy Materi Seminar 5 rangkap		
	Ujian Akhir		Rp. 500.000,-
	- Konsumsi		
	- Sewa Laptop dan LCD		
		Jumlah :	Rp. 750.000,-

REKAPITULASI BIAYA PENELITIAN

1.	**Transportasi**	: **Rp.**	**1.500.000,-**
2.	**Perangkat Penelitian**	: **Rp.**	**1.250.000,-**
3.	**Penyusunan Laporan**	: **Rp.**	**2.750.000,-**
4.	**Seminar Hasil Ujian**	: **Rp.**	**750.000,-**
	Jumlah	: **Rp.**	**6.250.000,-**

Terbilang:
Enam Juta Dua Ratus Lima Puluh Ribu Rupiah

Hormat Saya,
Peneliti

Sammyles G. M. Amaheka
NRP. 090 315 124M

LAMPIRAN 2

LANGKAH PERHITUNGAN BERPIKIR TERSISTEM PROGRAM STELLA
PROPINSI JAWA TIMUR:

SKENARIO 1.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 35.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN__HIDUP = 63.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 60.94
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 15195661
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 594.30
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 19.1
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 40.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 5.80
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_harapan_hidup = 0
delta_hdi = 0
delta_lama_sekolah = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
```

```
nilai_min2_konsum_per__kapita_UNDP)/(nilai maks_konsum_per__kapita_UNDP-
nilai_min1 konsum_per__kapita_UNDP))*100
Indeks  harapan__hidup = (HARPN  HIDUP-min_harapan_hidup .UNDP)/(maks_harapan_hidup UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA  SEKLAH-0)/(lama_sekolah maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum_per ._kapita_UNDP-KONSM_ PE_KAP
lama_sekolah_maks UNDP = 15
layak_hidup = 1/3*(TOK_DPT_AIR_BER+TOK_DPT_FAS_KES+BALITA__KR_GIZI)
maks harapan_hidup_UNDP = 85
MELEK_HURUF = (4,5*HDI-4,5*1/3*indeks__harapan__hidup-4,5*1/3*indeks_pendapatan-
4,5*1/9*indeks__lama sekolah)
min_harapan_hidup UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1 konsum_per__kapita_UNDP = 300000/1000
nilai min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 4.34), (1997, 4,54), (1998, 4,76), (1999, 5.65), (2000, 5,98), (2001, 6.36), (2002,
0.00), (2003, 0.00), (2004, 8.16), (2005, 8.16), (2006, 8.16), (2007, 8.16), (2008, 8.16), (2009, 8.16),
(2010, 8.16), (2011, 8.16), (2012, 8.16), (2013, 8.16), (2014, 8.16), (2015, 8.16)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_fas kes1 = GRAPH(time)
(1995, 0.00), (1996, 64.9), (1997, 39.4), (1998, 28.3), (1999, 9.94), (2000, 9.04), (2001, 8.29), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.89), (1997, 0.88), (1998, 0.87), (1999, 0.25), (2000, 0.25), (2001, 0.25), (2002,
1.21), (2003, 0.6), (2004, 0.373), (2005, 0.373), (2006, 0.373), (2007, 0.373), (2008, 0.373), (2009, 0.373),
(2010, 0.373), (2011, 0.373), (2012, 0.373), (2013, 0.373), (2014, 0.373), (2015, 0.373)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.47), (1997, 0.47), (1998, 0.47), (1999, 1.23), (2000, 1.22), (2001, 1.20), (2002,
1.31), (2003, 0.77), (2004, 1.59), (2005, 1.59), (2006, 1.59), (2007, 1.59), (2008, 1.59), (2009, 1.59),
(2010, 1.59), (2011, 1.59), (2012, 1.59), (2013, 1.59), (2014, 1.59), (2015, 1.59)
delta kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.28), (2000, 0.00), (2001, 2.37), (2002,
0.00), (2003, 3.19), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 1.97), (1996, 1.94), (1997, 1.90), (1998, 2.19), (1999, 0.00), (2000, 5.76), (2001, 0.00), (2002,
4.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.86), (1997, 0.87), (1998, 0.87), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.85), (2000, 0.84), (2001, 0.84), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.42), (1997, 2.37), (1998, 2.31), (1999, 3.39), (2000, 3.28), (2001, 3.17), (2002,
0.00), (2003, 0.77), (2004, 2.93), (2005, 2.93), (2006, 2.93), (2007, 2.93), (2008, 2.93), (2009, 2.93),
(2010, 2.93), (2011, 2.93), (2012, 2.93), (2013, 2.93), (2014, 2.93), (2015, 2.93)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.88), (2000, 5.13), (2001, 5.41), (2002,
0.00), (2003, 0.00), (2004, 11.2), (2005, 11.2), (2006, 11.2), (2007, 11.2), (2008, 11.2), (2009, 11.2),
(2010, 11.2), (2011, 11.2), (2012, 11.2), (2013, 11.2), (2014, 11.2), (2015, 11.2)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 1.80), (1997, 1.77), (1998, 1.74), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 5.06), (1997, 5.33), (1998, 5.63), (1999, 1.85), (2000, 1.89), (2001, 1.92), (2002,
0.00), (2003, 0.00), (2004, 3.79), (2005, 3.79), (2006, 3.79), (2007, 3.79), (2008, 3.79), (2009, 3.79),
(2010, 3.79), (2011, 3.79), (2012, 3.79), (2013, 3.79), (2014, 3.79), (2015, 3.79)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.05), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
```

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.51), (2005, 1.51), (2006, 1.51), (2007, 1.51), (2008, 1.51), (2009, 1.51), (2010, 1.51), (2011, 1.51), (2012, 1.51), (2013, 1.51), (2014, 1.51), (2015, 1.51)

SKENARIO 2.

```
BALITA_KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 35.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 63.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 60.94
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 15195661
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 594.30
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 19.1
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 40.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 5.80
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_harapan_hidup = 0
delta_hdi = 0
delta_lama_sekolah = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
```

```
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan
4.5*1/9*indeks__lama_sekolah)
min harapan hidup UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 4.34), (1997, 4.54), (1998, 4.76), (1999, 5.65), (2000, 5.98), (2001, 6.36), (2002,
0.00), (2003, 0.00), (2004, 13.8), (2005, 13.8), (2006, 13.8), (2007, 13.8), (2008, 13.8), (2009, 13.8),
(2010, 13.8), (2011, 13.8), (2012, 13.8), (2013, 13.8), (2014, 13.8), (2015, 13.8)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003,
0.00), (2004, 12.7), (2005, 12.7), (2006, 12.7), (2007, 12.7), (2008, 12.7), (2009, 12.7), (2010, 12.7),
(2011, 12.7), (2012, 12.7), (2013, 12.7), (2014, 12.7), (2015, 12.7)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 64.9), (1997, 39.4), (1998, 28.3), (1999, 9.94), (2000, 9.04), (2001, 8.29), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.89), (1997, 0.88), (1998, 0.87), (1999, 0.25), (2000, 0.25), (2001, 0.25), (2002,
1.21), (2003,
0.6), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011,
1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
delta hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.47), (1997, 0.47), (1998, 0.47), (1999, 1.23), (2000, 1.22), (2001, 1.20), (2002,
1.31), (2003, 0.77), (2004, 2.42), (2005, 2.42), (2006, 2.42), (2007, 2.42), (2008, 2.42), (2009, 2.42),
(2010, 2.42), (2011, 2.42), (2012, 2.42), (2013, 2.42), (2014, 2.42), (2015, 2.42)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.28), (2000, 0.00), (2001, 2.37), (2002,
0.00), (2003, 3.19), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 1.97), (1996, 1.94), (1997, 1.90), (1998, 2.19), (1999, 0.00), (2000, 5.76), (2001, 0.00), (2002,
4.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.86), (1997, 0.87), (1998, 0.87), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.85), (2000, 0.84), (2001, 0.84), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.42), (1997, 2.37), (1998, 2.31), (1999, 3.39), (2000, 3.28), (2001, 3.17), (2002,
0.00), (2003, 0.77), (2004, 5.66), (2005, 5.66), (2006, 5.66), (2007, 5.66), (2008, 5.66), (2009, 5.66),
(2010, 5.66), (2011, 5.66), (2012, 5.66), (2013, 5.66), (2014, 5.66), (2015, 5.66)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.88), (2000, 5.13), (2001, 5.41), (2002,
0.00), (2003, 0.00), (2004, 16.6), (2005, 16.6), (2006, 16.6), (2007, 16.6), (2008, 16.6), (2009, 16.6),
(2010, 16.6), (2011, 16.6), (2012, 16.6), (2013, 16.6), (2014, 16.6), (2015, 16.6)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 1.80), (1997, 1.77), (1998, 1.74), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta  meningga\ scb 40 th = GRAPH(TIME)
(1995, 0.00), (1996, 5.06), (1997, 5.33), (1998, 5.63), (1999, 1.85), (2000, 1.89), (2001, 1.92), (2002,
0.00), (2003, 0.00), (2004, 9.66), (2005, 9.66), (2006, 9.66), (2007, 9.66), (2008, 9.66), (2009, 9.66),
(2010, 9.66), (2011, 9.66), (2012, 9.66), (2013, 9.66), (2014, 9.66), (2015, 9.66)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.05), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.70), (2005, 1.70), (2006, 1.70), (2007, 1.70), (2008, 1.70), (2009, 1.70),
(2010, 1.70), (2011, 1.70), (2012, 1.70), (2013, 1.70), (2014, 1.70), (2015, 1.70)
```

SKENARIO 3.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 35.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 63.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 60.94
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_della_kk) * dt
INIT KESMPT_KERJA = 15195661
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 594.30
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 19.1
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 40.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 5.80
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_harapan_hidup = 0
delta_hdi = 0
delta_lama_sekolah = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

```
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_harapan_hidup-4.5*1/3*indcks pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum_per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_dalila  kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 4.34), (1997, 4.54), (1998, 4.76), (1999, 5.65), (2000, 5.98), (2001, 6.36), (2002,
0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0),
(2010, 54.0), (2011, 54.0), (2012, 54.0), (2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0),
(2010, 54.0), (2011, 54.0), (2012, 54.0), (2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 64.9), (1997, 39.4), (1998, 28.3), (1999, 9.94), (2000, 9.04), (2001, 8.29), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.89), (1997, 0.88), (1998, 0.87), (1999, 0.25), (2000, 0.25), (2001, 0.25), (2002,
1.21), (2003, 0.6), (2004, 1.60), (2005, 1.60), (2006, 1.60), (2007, 1.60), (2008, 1.60), (2009, 1.60), (2010,
1.60), (2011, 1.60), (2012, 1.60), (2013, 1.60), (2014, 1.60), (2015, 1.60)
delta_hidi = GRAPH(time)
(1995, 0.00), (1996, 0.47), (1997, 0.47), (1998, 0.47), (1999, 1.23), (2000, 1.22), (2001, 1.20), (2002,
1.31), (2003, 0.77), (2004, 3.19), (2005, 3.19), (2006, 3.19), (2007, 3.19), (2008, 3.19), (2009, 3.19),
(2010, 3.19), (2011, 3.19), (2012, 3.19), (2013, 3.19), (2014, 3.19), (2015, 3.19)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.28), (2000, 0.00), (2001, 2.37), (2002,
0.00), (2003,
3.19), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00),
(2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 1.97), (1996, 1.94), (1997, 1.90), (1998, 2.19), (1999, 0.00), (2000, 5.76), (2001, 0.00), (2002,
4.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.86), (1997, 0.87), (1998, 0.87), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003,
0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00),
(2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.85), (2000, 0.84), (2001, 0.84), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.42), (1997, 2.37), (1998, 2.31), (1999, 3.39), (2000, 3.28), (2001, 3.17), (2002,
0.00), (2003, 0.77), (2004, 7.82), (2005, 7.82), (2006, 7.82), (2007, 7.82), (2008, 7.82), (2009, 7.82),
(2010, 7.82), (2011, 7.82), (2012, 7.82), (2013, 7.82), (2014, 7.82), (2015, 7.82)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.88), (2000, 5.13), (2001, 5.41), (2002,
0.00), (2003, 0.00), (2004, 56.0), (2005, 56.0), (2006, 56.0), (2007, 56.0), (2008, 56.0), (2009, 56.0),
(2010, 56.0), (2011, 56.0), (2012, 56.0),
(2013, 56.0), (2014, 56.0), (2015, 56.0)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 1.80), (1997, 1.77), (1998, 1.74), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__menunggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 5.06), (1997, 5.33), (1998, 5.63), (1999, 1.85), (2000, 1.89), (2001, 1.92), (2002,
0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0),
(2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.05), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.90), (2005, 1.90), (2006, 1.90), (2007, 1.90), (2008, 1.90), (2009, 1.90),
(2010, 1.90), (2011, 1.90), (2012, 1.90), (2013, 1.90), (2014, 1.90), (2015, 1.90)

REALITAS.
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 35.3
```

```
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN__HIDUP = 63.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 60.94
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 15195661
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 594.30
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 19.1
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 40.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 5.80
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_harapan_hidup = 0
delta_hdi = 0
delta_lama_sekolah = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
```

```
nilai_maks_konsum_per_kapita_UNDP = 73272O/1000
nilai_min1 konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum_per_ kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 4.34), (1997, 4.54), (1998, 4.76), (1999, 5.65), (2000, 5.98), (2001, 6.36), (2002,
0.00), (2003, 0.00), (2004, 6.78), (2005, 6.35), (2006, 5.97), (2007, 5.64), (2008, 5.34), (2009, 5.07),
(2010, 4.82), (2011, 4.60), (2012, 4.40), (2013, 4.21), (2014, 4.04), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 7.66), (2005, 7.11), (2006, 6.64), (2007, 6.23), (2008, 5.86), (2009, 5.54),
(2010, 5.25), (2011, 4.99), (2012, 4.75), (2013, 4.53), (2014, 4.34), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 64.9), (1997, 39.4), (1998, 28.3), (1999, 9.94), (2000, 9.04), (2001, 8.29), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.89), (1997, 0.88), (1998, 0.87), (1999, 0.25), (2000, 0.25), (2001, 0.25), (2002,
1.21), (2003, 0.6), (2004, 0.253), (2005, 0.252), (2006, 0.252), (2007, 0.251), (2008, 0.25), (2009, 0.25),
(2010, 0.249), (2011, 0.249), (2012, 0.249), (2013, 0.247), (2014, 0.247), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.47), (1997, 0.47), (1998, 0.47), (1999, 1.23), (2000, 1.22), (2001, 1.20), (2002,
1.31), (2003, 0.77), (2004, 0.993), (2005, 0.984), (2006, 0.974), (2007, 0.965), (2008, 0.955), (2009,
0.946), (2010, 0.938), (2011, 0.929), (2012, 0.92), (2013, 0.912), (2014, 0.904), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.28), (2000, 0.00), (2001, 2.37), (2002,
0.00), (2003, 3.19), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 1.97), (1996, 1.94), (1997, 1.90), (1998, 2.19), (1999, 0.00), (2000, 5.76), (2001, 0.00), (2002,
4.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.86), (1997, 0.87), (1998, 0.87), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.85), (2000, 0.84), (2001, 0.84), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.42), (1997, 2.37), (1998, 2.31), (1999, 3.39), (2000, 3.28), (2001, 3.17), (2002,
0.00), (2003, 0.77), (2004, 3.05), (2005, 2.96), (2006, 2.88), (2007, 2.80), (2008, 2.72), (2009, 2.65),
(2010, 2.58), (2011, 2.52), (2012, 2.45), (2013, 2.40), (2014, 2.34), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.88), (2000, 5.13), (2001, 5.41), (2002,
0.00), (2003, 0.00), (2004, 5.72), (2005, 5.41), (2006, 5.13), (2007, 4.88), (2008, 4.66), (2009, 4.45),
(2010, 4.26), (2011, 4.09), (2012, 3.93), (2013, 3.78), (2014, 3.64), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 1.80), (1997, 1.77), (1998, 1.74), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tmeninggal_sep_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 5.06), (1997, 5.33), (1998, 5.63), (1999, 1.85), (2000, 1.89), (2001, 1.92), (2002,
0.00), (2003, 0.00), (2004, 1.96), (2005, 2.00), (2006, 2.04), (2007, 2.08), (2008, 2.13), (2009, 2.17),
(2010, 2.22), (2011, 2.27), (2012, 2.33), (2013, 2.38), (2014, 2.44), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.05), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.83), (2005, 0.823), (2006, 0.817), (2007, 0.81), (2008, 0.804), (2009, 0.797),
(2010, 0.791), (2011, 0.785), (2012, 0.778), (2013, 0.772), (2014, 0.767), (2015, 0.00)
```

KOTA SURABAYA:

SKENARIO 1.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 25.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 67.09
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 1179737
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 583.1
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.7
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 11.7
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 4.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_fas_kes1 = 0
delta_konsum_per_kapita = 0
delta_tanpa_air_bersih1 = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
```

```
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*index._harapan__hidup-4.5*1/3*index_pendapatan-
4.5*1/9*index__lama_sekolah)
min harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.58), (2000, 2.65), (2001, 2.72), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.17), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002,
1.24), (2003, 0.00), (2004, 0.086), (2005, 0.086), (2006, 0.086), (2007, 0.086), (2008, 0.086), (2009,
0.086), (2010, 0.086), (2011, 0.086), (2012, 0.086), (2013, 0.086), (2014, 0.086), (2015, 0.086)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.54), (1996, 0.88), (1997, 0.87), (1998, 0.87), (1999, 1.34), (2000, 1.32), (2001, 1.30), (2002,
0.68), (2003, 0.00), (2004, 0.9), (2005, 0.9), (2006, 0.9), (2007, 0.9), (2008, 0.9), (2009, 0.9), (2010, 0.9),
(2011, 0.9), (2012, 0.9), (2013, 0.9), (2014, 0.9), (2015, 0.9)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 13.2), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010,
0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.08), (1999, 0.00), (2000, 5.38), (2001, 1.21), (2002,
1.70), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.36), (1997, 0.36), (1998, 0.36), (1999, 1.14), (2000, 1.12), (2001, 1.11), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.14), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.15), (1997, 1.14), (1998, 1.12), (1999, 2.96), (2000, 2.88), (2001, 2.80), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 20.0), (2000, 25.0), (2001, 33.3), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta _ meninggal_sebb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.14), (2000, 1.15), (2001, 1.17), (2002,
0.00), (2003, 0.00), (2004, 1.11), (2005, 1.11), (2006, 1.11), (2007, 1.11), (2008, 1.11), (2009, 1.11),
(2010, 1.11), (2011, 1.11), (2012, 1.11), (2013, 1.11), (2014, 1.11), (2015, 1.11)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.09), (1996, 1.09), (1997, 1.09), (1998, 1.09), (1999, 1.11), (2000, 1.06), (2001, 1.07), (2002,
1.08), (2003, 1.07), (2004, 1.08), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.27), (2005, 1.27), (2006, 1.27), (2007, 1.27), (2008, 1.27), (2009, 1.27),
(2010, 1.27), (2011, 1.27), (2012, 1.27), (2013, 1.27), (2014, 1.27), (2015, 1.27)
```

SKENARIO 2.

```
BALITA__KR_GIZI(t) = BALITA_ KR GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f delta_balita_kur_gizi) * dt
INIT BALITA  KR_GIZI = 25.8
```

```
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 67.09
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 1179737
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 583.1
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.7
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 11.7
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 4.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*della_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = della_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_fas_kes1 = 0
delta_konsum_per_kapita = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks__harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA_KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
```

nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.58), (2000, 2.65), (2001, 2.72), (2002, 0.00), (2003, 0.00), (2004, 13.2), (2005, 13.2), (2006, 13.2), (2007, 13.2), (2008, 13.2), (2009, 13.2), (2010, 13.2), (2011, 13.2), (2012, 13.2), (2013, 13.2), (2014, 13.2), (2015, 13.2)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 24.0), (2000, 31.6), (2001, 46.3), (2002, 0.00), (2003, 0.00), (2004, 6.10), (2005, 6.10), (2006, 6.10), (2007, 6.10), (2008, 6.10), (2009, 6.10), (2010, 6.10), (2011, 6.10), (2012, 6.10), (2013, 6.10), (2014, 6.10), (2015, 6.10)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.17), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.24), (2003, 0.00), (2004, 0.716), (2005, 0.716), (2006, 0.716), (2007, 0.716), (2008, 0.716), (2009, 0.716), (2010, 0.716), (2011, 0.716), (2012, 0.716), (2013, 0.716), (2014, 0.716), (2015, 0.716)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.54), (1996, 0.88), (1997, 0.87), (1998, 0.87), (1999, 1.34), (2000, 1.32), (2001, 1.30), (2002, 0.68), (2003, 0.00), (2004, 1.58), (2005, 1.58), (2006, 1.58), (2007, 1.58), (2008, 1.58), (2009, 1.58), (2010, 1.58), (2011, 1.58), (2012, 1.58), (2013, 1.58), (2014, 1.58), (2015, 1.58)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 13.2), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.08), (1999, 0.00), (2000, 5.38), (2001, 1.21), (2002, 1.70), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.36), (1997, 0.36), (1998, 0.36), (1999, 1.14), (2000, 1.12), (2001, 1.11), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 2.14), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.15), (1997, 1.14), (1998, 1.12), (1999, 2.96), (2000, 2.88), (2001, 2.80), (2002, 0.00), (2003, 0.00), (2004, 2.06), (2005, 2.06), (2006, 2.06), (2007, 2.06), (2008, 2.06), (2009, 2.06), (2010, 2.06), (2011, 2.06), (2012, 2.06), (2013, 2.06), (2014, 2.06), (2015, 2.06)
delta tanpa air bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 20.0), (2000, 25.0), (2001, 33.3), (2002, 0.00), (2003, 0.00), (2004, 6.10), (2005, 6.10), (2006, 6.10), (2007, 6.10), (2008, 6.10), (2009, 6.10), (2010, 6.10), (2011, 6.10), (2012, 6.10), (2013, 6.10), (2014, 6.10), (2015, 6.10)
delta__menlnggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.14), (2000, 1.15), (2001, 1.17), (2002, 0.00), (2003, 0.00), (2004, 7.15), (2005, 7.15), (2006, 7.15), (2007, 7.15), (2008, 7.15), (2009, 7.15), (2010, 7.15), (2011, 7.15), (2012, 7.15), (2013, 7.15), (2014, 7.15), (2015, 7.15)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.09), (1996, 1.09), (1997, 1.09), (1998, 1.09), (1999, 1.11), (2000, 1.06), (2001, 1.07), (2002, 1.08), (2003, 1.07), (2004, 1.08), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06), (2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.46), (2005, 1.46), (2006, 1.46), (2007, 1.46), (2008, 1.46), (2009, 1.46), (2010, 1.46), (2011, 1.46), (2012, 1.46), (2013, 1.46), (2014, 1.46), (2015, 1.46)

SKENARIO 3.

BALITA KR GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA KR GIZI = 25.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita kur gizi1/100
OUTFLOWS:
f_delta balita kur gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + ((f_delta_harapan hidup1 - f delta__harapan_hidup) * dt

```
INIT HARPN__HIDUP = 66.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 67.09
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 1179737
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 583.1
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.7
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 11.7
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 4.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_fas_kes1 = 0
delta_konsum_per_kapita = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
```

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.58), (2000, 2.65), (2001, 2.72), (2002, 0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0), (2010, 54.0), (2011, 54.0), (2012, 54.0), (2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 24.0), (2000, 31.6), (2001, 46.3), (2002, 0.00), (2003, 0.00), (2004, 45.0), (2005, 45.0), (2006, 45.0), (2007, 45.0), (2008, 45.0), (2009, 45.0), (2010, 45.0), (2011, 45.0), (2012, 45.0), (2013, 45.0), (2014, 45.0), (2015, 45.0)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.17), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.24), (2003, 0.00), (2004, 1.31), (2005, 1.31), (2006, 1.31), (2007, 1.31), (2008, 1.31), (2009, 1.31), (2010, 1.31), (2011, 1.31), (2012, 1.31), (2013, 1.31), (2014, 1.31), (2015, 1.31)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.54), (1996, 0.88), (1997, 0.87), (1998, 0.87), (1999, 1.34), (2000, 1.32), (2001, 1.30), (2002, 0.68), (2003, 0.00), (2004, 2.25), (2005, 2.25), (2006, 2.25), (2007, 2.25), (2008, 2.25), (2009, 2.25), (2010, 2.25), (2011, 2.25), (2012, 2.25), (2013, 2.25), (2014, 2.25), (2015, 2.25)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 13.2), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.08), (1999, 0.00), (2000, 5.38), (2001, 1.21), (2002, 1.70), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.36), (1997, 0.36), (1998, 0.36), (1999, 1.14), (2000, 1.12), (2001, 1.11), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 2.14), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.15), (1997, 1.14), (1998, 1.12), (1999, 2.96), (2000, 2.88), (2001, 2.80), (2002, 0.00), (2003, 0.00), (2004, 4.15), (2005, 4.15), (2006, 4.15), (2007, 4.15), (2008, 4.15), (2009, 4.15), (2010, 4.15), (2011, 4.15), (2012, 4.15), (2013, 4.15), (2014, 4.15), (2015, 4.15)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 20.0), (2000, 25.0), (2001, 33.3), (2002, 0.00), (2003, 0.00), (2004, 42.0), (2005, 42.0), (2006, 42.0), (2007, 42.0), (2008, 42.0), (2009, 42.0), (2010, 42.0), (2011, 42.0), (2012, 42.0), (2013, 42.0), (2014, 42.0), (2015, 42.0)
delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.14), (2000, 1.15), (2001, 1.17), (2002, 0.00), (2003, 0.00), (2004, 51.0), (2005, 51.0), (2006, 51.0), (2007, 51.0), (2008, 51.0), (2009, 51.0), (2010, 51.0), (2011, 51.0), (2012, 51.0), (2013, 51.0), (2014, 51.0), (2015, 51.0)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.09), (1996, 1.09), (1997, 1.09), (1998, 1.09), (1999, 1.11), (2000, 1.06), (2001, 1.07), (2002, 1.08), (2003, 1.07), (2004, 1.08), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06), (2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.65), (2005, 1.65), (2006, 1.65), (2007, 1.65), (2008, 1.65), (2009, 1.65), (2010, 1.65), (2011, 1.65), (2012, 1.65), (2013, 1.65), (2014, 1.65), (2015, 1.65)

REALITAS.
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 25.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt

```
INIT HDI = 67.09
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 1179737
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 583.1
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.7
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 11.7
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 4.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_fas_kes1 = 0
delta_konsum_per_kapita = 0
delta_tanpa_air_bersih1 = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per_kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*Indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.58), (2000, 2.65), (2001, 2.72), (2002,
0.00), (2003, 0.00), (2004, 2.82), (2005, 2.74), (2006, 2.67), (2007, 2.60), (2008, 2.53), (2009, 2.47),
(2010, 2.41), (2011, 2.35), (2012, 2.30), (2013, 2.25), (2014, 2.20), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 24.0), (2000, 31.6), (2001, 46.3), (2002,
0.00), (2003, 0.00), (2004, 86.2), (2005, 46.3), (2006, 31.6), (2007, 24.0), (2008, 19.4), (2009, 16.2),
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(2010, 14.0), (2011, 12.3), (2012, 10.9), (2013, 9.84), (2014, 8.96), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.17), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002,
1.24), (2003, 0.00), (2004, 0.144), (2005, 0.144), (2006, 0.144), (2007, 0.144), (2008, 0.143), (2009,
0.143), (2010, 0.143), (2011, 0.143), (2012, 0.143), (2013, 0.142), (2014, 0.142), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.54), (1996, 0.88), (1997, 0.87), (1998, 0.87), (1999, 1.34), (2000, 1.32), (2001, 1.30), (2002,
0.68), (2003, 0.00), (2004, 1.11), (2005, 1.09), (2006, 1.08), (2007, 1.07), (2008, 1.06), (2009, 1.05),
(2010, 1.04), (2011, 1.03), (2012, 1.02), (2013, 1.01), (2014, 0.996), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 13.2), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010,
0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.08), (1999, 0.00), (2000, 5.38), (2001, 1.21), (2002,
1.70), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.36), (1997, 0.36), (1998, 0.36), (1999, 1.14), (2000, 1.12), (2001, 1.11), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.14), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta lama sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.15), (1997, 1.14), (1998, 1.12), (1999, 2.96), (2000, 2.88), (2001, 2.80), (2002,
0.00), (2003, 0.00), (2004, 2.82), (2005, 2.74), (2006, 2.67), (2007, 2.60), (2008, 2.53), (2009, 2.47),
(2010, 2.41), (2011, 2.35), (2012, 2.30), (2013, 2.25), (2014, 2.20), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 20.0), (2000, 25.0), (2001, 33.3), (2002,
0.00), (2003, 0.00), (2004, 50.0), (2005, 33.3), (2006, 25.0), (2007, 20.0), (2008, 16.7), (2009, 14.3),
(2010, 12.5), (2011, 11.1), (2012, 10.0), (2013, 9.09), (2014, 8.33), (2015, 0.00)
delta__meninggal_sebelum_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.14), (2000, 1.15), (2001, 1.17), (2002,
0.00), (2003, 0.00), (2004, 1.15), (2005, 1.14), (2006, 1.12), (2007, 1.11), (2008, 1.10), (2009, 1.09),
(2010, 1.08), (2011, 1.06), (2012, 1.05), (2013, 1.04), (2014, 1.03), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio TKK = GRAPH(time)
(1995, 1.09), (1996, 1.09), (1997, 1.09), (1998, 1.09), (1999, 1.11), (2000, 1.06), (2001, 1.07), (2002,
1.08), (2003, 1.07), (2004, 1.08), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.10), (2005, 1.09), (2006, 1.08), (2007, 1.06), (2008, 1.05), (2009, 1.04),
(2010, 1.03), (2011, 1.02), (2012, 1.01), (2013, 1.00), (2014, 0.99), (2015, 0.00)
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KOTA MALANG:

SKENARIO 1.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 23.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 64.5
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.8
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 318657
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 595
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.4
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 14.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.1
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 34.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_fas_kes1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85

```
MELEK_HURUF = (4.5*HDI+4.5*1/3*indeks__harapan__hidup+4.5*1/3*indeks_pendapatan+
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks_konsum_per_ kapita_UNDP = 732720/1000
nilai_min1_konsum_per_ kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.85), (2000, 2.77), (2001, 2.70), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita__kur gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 8.13), (2005, 8.13), (2006, 8.13), (2007, 8.13), (2008, 8.13), (2009, 8.13),
(2010, 8.13), (2011, 8.13), (2012, 8.13), (2013, 8.13), (2014, 8.13), (2015, 8.13)
delta fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.70), (2000, 3.85), (2001, 4.00), (2002,
0.00), (2003, 0.00), (2004, 9.61), (2005, 9.61), (2006, 9.61), (2007, 9.61), (2008, 9.61), (2009, 9.61),
(2010, 9.61), (2011, 9.61), (2012, 9.61), (2013, 9.61), (2014, 9.61), (2015, 9.61)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.88), (1997, 0.87), (1998, 0.86), (1999, 0.2), (2000, 0.2), (2001, 0.2), (2002, 0.36),
(2003, 2.29), (2004, 0.215), (2005, 0.215), (2006, 0.215), (2007, 0.215), (2008, 0.215), (2009, 0.215),
(2010, 0.215), (2011, 0.215), (2012, 0.215), (2013, 0.215), (2014, 0.215), (2015, 0.215)
delta_hdi = GRAPH(time)
(1995, 0.52), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.76), (1997, 0.75), (1998, 0.74), (1999, 1.66), (2000, 1.63), (2001, 1.61), (2002,
0.27), (2003, 0.54), (2004, 0.9), (2005, 0.9), (2006, 0.9), (2007, 0.9), (2008, 0.9), (2009, 0.9), (2010, 0.9),
(2011, 0.9), (2012, 0.9), (2013, 0.9), (2014, 0.9), (2015, 0.9)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 12.9), (2000, 0.00), (2001, 3.91), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.47), (1999, 0.00), (2000, 4.38), (2001, 0.00), (2002,
1.74), (2003, 4.70), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.28), (1997, 0.28), (1998, 0.28), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.47), (2000, 1.45), (2001, 1.43), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 7.10), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.79), (1997, 0.79), (1998, 0.78), (1999, 5.43), (2000, 5.15), (2001, 4.90), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.09), (2000, 3.19), (2001, 3.29), (2002,
0.00), (2003, 0.00), (2004, 11.5), (2005, 11.5), (2006, 11.5), (2007, 11.5), (2008, 11.5), (2009, 11.5),
(2010, 11.5), (2011, 11.5), (2012, 11.5), (2013, 11.5), (2014, 11.5), (2015, 11.5)
delta  meninggal_sebab_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.13), (2000, 1.14), (2001, 1.15), (2002,
0.00), (2003, 0.00), (2004, 3.20), (2005, 3.20), (2006, 3.20), (2007, 3.20), (2008, 3.20), (2009, 3.20),
(2010, 3.20), (2011, 3.20), (2012, 3.20), (2013, 3.20), (2014, 3.20), (2015, 3.20)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.12), (1996, 1.12), (1997, 1.12), (1998, 1.12), (1999, 1.13), (2000, 1.09), (2001, 1.09), (2002,
1.12), (2003, 1.13), (2004, 1.13), (2005, 1.13), (2006, 1.13), (2007, 1.13), (2008, 1.13), (2009, 1.13),
(2010, 1.13), (2011, 1.13), (2012, 1.13), (2013, 1.13), (2014, 1.13), (2015, 1.13)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.17), (2005, 1.17), (2006, 1.17), (2007, 1.17), (2008, 1.17), (2009, 1.17),
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(2010, 1.17), (2011, 1.17), (2012, 1.17), (2013, 1.17), (2014, 1.17), (2015, 1.17)

SKENARIO 2.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 23.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 64.5
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.8
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 318657
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 595
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.4
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 14.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 42.1
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 34.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_fas_kes1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

```
MELEK HURUF = (4.5*HDI-4.5*1/3*indeks_harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2 konsum per kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.85), (2000, 2.77), (2001, 2.70), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 13.7), (2005, 13.7), (2006, 13.7), (2007, 13.7), (2008, 13.7), (2009, 13.7),
(2010, 13.7), (2011, 13.7), (2012, 13.7),
(2013, 13.7), (2014, 13.7), (2015, 13.7)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.70), (2000, 3.85), (2001, 4.00), (2002,
0.00), (2003, 0.00), (2004, 15.1), (2005, 15.1), (2006, 15.1), (2007, 15.1), (2008, 15.1), (2009, 15.1),
(2010, 15.1), (2011, 15.1), (2012, 15.1), (2013, 15.1), (2014, 15.1), (2015, 15.1)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003,
0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00),
(2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.88), (1997, 0.87), (1998, 0.86), (1999, 0.2), (2000, 0.2), (2001, 0.2), (2002, 0.36),
(2003, 2.29), (2004, 0.845), (2005, 0.845), (2006, 0.845), (2007, 0.845), (2008, 0.845), (2009, 0.845),
(2010, 0.845), (2011, 0.845), (2012, 0.845), (2013, 0.845), (2014, 0.845), (2015, 0.845)
delta_hdi = GRAPH(time)
(1995, 0.52), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.76), (1997, 0.75), (1998, 0.74), (1999, 1.66), (2000, 1.63), (2001, 1.61), (2002,
0.27), (2003, 0.54), (2004, 1.61), (2005, 1.61), (2006, 1.61), (2007, 1.61), (2008, 1.61), (2009, 1.61),
(2010, 1.61), (2011, 1.61), (2012, 1.61), (2013, 1.61), (2014, 1.61), (2015, 1.61)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 12.9), (2000, 0.00), (2001, 3.91), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.47), (1999, 0.00), (2000, 4.38), (2001, 0.00), (2002,
1.74), (2003, 4.70), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.28), (1997, 0.28), (1998, 0.28), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.47), (2000, 1.45), (2001, 1.43), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 7.10), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta lama sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.79), (1997, 0.79), (1998, 0.78), (1999, 5.43), (2000, 5.15), (2001, 4.90), (2002,
0.00), (2003, 0.00), (2004, 2.35), (2005, 2.35), (2006, 2.35), (2007, 2.35), (2008, 2.35), (2009, 2.35),
(2010, 2.35), (2011, 2.35), (2012, 2.35), (2013, 2.35), (2014, 2.35), (2015, 2.35)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.09), (2000, 3.19), (2001, 3.29), (2002,
0.00), (2003, 0.00), (2004, 16.9), (2005, 16.9), (2006, 16.9), (2007, 16.9), (2008, 16.9), (2009, 16.9),
(2010, 16.9), (2011, 16.9), (2012, 16.9), (2013, 16.9), (2014, 16.9), (2015, 16.9)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.13), (2000, 1.14), (2001, 1.15), (2002,
0.00), (2003, 0.00), (2004, 9.11), (2005, 9.11), (2006, 9.11), (2007, 9.11), (2008, 9.11), (2009, 9.11),
(2010, 9.11), (2011, 9.11), (2012, 9.11), (2013, 9.11), (2014, 9.11), (2015, 9.11)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.12), (1996, 1.12), (1997, 1.12), (1998, 1.12), (1999, 1.13), (2000, 1.09), (2001, 1.09), (2002,
1.12), (2003, 1.13), (2004, 1.13), (2005, 1.13), (2006, 1.13), (2007, 1.13), (2008, 1.13), (2009, 1.13),
(2010, 1.13), (2011, 1.13), (2012, 1.13), (2013, 1.13), (2014, 1.13), (2015, 1.13)
total_delta_konsum_per_kapita = GRAPH(time)
```

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.36), (2005, 1.36), (2006, 1.36), (2007, 1.36), (2008, 1.36), (2009, 1.36), (2010, 1.36), (2011, 1.36), (2012, 1.36), (2013, 1.36), (2014, 1.36), (2015, 1.36)

SKENARIO 3.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 23.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN__HIDUP = 64.5
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.8
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 318657
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 595
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.4
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 14.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 42.1
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 34.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_fas_kes1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
```

```
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks konsum_per__kapita_UNDP = 732720/1000
nilai min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 3600000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.85), (2000, 2.77), (2001, 2.70), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0),
(2010, 54.0), (2011, 54.0), (2012, 54.0),
(2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_tas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.70), (2000, 3.85), (2001, 4.00), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta harapan hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
dcfta hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.76), (1997, 0.75), (1998, 0.74), (1999, 1.66), (2000, 1.63), (2001, 1.61), (2002,
0.27), (2003, 0.54), (2004, 2.30), (2005, 2.30), (2006, 2.30), (2007, 2.30), (2008, 2.30), (2009, 2.30),
(2010, 2.30), (2011, 2.30), (2012, 2.30), (2013, 2.30), (2014, 2.30), (2015, 2.30)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 12.9), (2000, 0.00), (2001, 3.91), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.47), (1999, 0.00), (2000, 4.38), (2001, 0.00), (2002,
1.74), (2003, 4.70), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.28), (1997, 0.28), (1998, 0.28), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.47), (2000, 1.45), (2001, 1.43), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 7.10), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.79), (1997, 0.79), (1998, 0.78), (1999, 5.43), (2000, 5.15), (2001, 4.90), (2002,
0.00), (2003, 0.00), (2004, 4.45), (2005, 4.45), (2006, 4.45), (2007, 4.45), (2008, 4.45), (2009, 4.45),
(2010, 4.45), (2011, 4.45), (2012, 4.45), (2013, 4.45), (2014, 4.45), (2015, 4.45)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.09), (2000, 3.19), (2001, 3.29), (2002,
0.00), (2003, 0.00), (2004, 56.0), (2005, 56.0), (2006, 56.0), (2007, 56.0), (2008, 56.0), (2009, 56.0),
(2010, 56.0), (2011, 56.0), (2012, 56.0), (2013, 56.0), (2014, 56.0), (2015, 56.0)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.13), (2000, 1.14), (2001, 1.15), (2002,
0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0),
(2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.12), (1996, 1.12), (1997, 1.12), (1998, 1.12), (1999, 1.13), (2000, 1.09), (2001, 1.09), (2002,
1.12), (2003, 1.13), (2004, 1.13), (2005, 1.13), (2006, 1.13), (2007, 1.13), (2008, 1.13), (2009, 1.13),
(2010, 1.13), (2011, 1.13), (2012, 1.13), (2013, 1.13), (2014, 1.13), (2015, 1.13)
```

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.55), (2005, 1.55), (2006, 1.55), (2007, 1.55), (2008, 1.55), (2009, 1.55), (2010, 1.55), (2011, 1.55), (2012, 1.55), (2013, 1.55), (2014, 1.55), (2015, 1.55)

REALITAS.
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 23.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 64.5
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.8
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 318657
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 595
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.4
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 14.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.1
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 34.2
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_fas_kes1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP

```
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*Indeks _harapan__hidup-4.5*1/3*Indeks_pendapatan-
4.5*1/9*Indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks_konsum per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.85), (2000, 2.77), (2001, 2.70), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita_ kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 2.64), (2005, 2.57), (2006, 2.51), (2007, 2.44), (2008, 2.39), (2009, 2.33), (2010, 2.28), (2011,
2.23), (2012, 2.18),
(2013, 2.13), (2014, 2.09), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.70), (2000, 3.85), (2001, 4.00), (2002,
0.00), (2003, 0.00), (2004, 4.18), (2005, 4.01), (2006, 3.86), (2007, 3.71), (2008, 3.58), (2009, 3.46),
(2010, 3.34), (2011, 3.23), (2012, 3.13), (2013, 3.04), (2014, 2.95), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.88), (1997, 0.87), (1998, 0.86), (1999, 0.2), (2000, 0.2), (2001, 0.2), (2002, 0.36),
(2003, 2.29), (2004, 0.19), (2005, 0.19), (2006, 0.189), (2007, 0.189), (2008, 0.189), (2009, 0.188), (2010,
0.188), (2011, 0.188), (2012, 0.187), (2013, 0.187), (2014, 0.187), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.52), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.76), (1997, 0.75), (1998, 0.74), (1999, 1.66), (2000, 1.63), (2001, L.61), (2002,
0.27), (2003, 0.54), (2004, 1.57), (2005, 1.55), (2006, 1.52), (2007, 1.50), (2008, 1.48), (2009, 1.46),
(2010, 1.44), (2011, 1.42), (2012, 1.40), (2013, 1.38), (2014, 1.36), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 12.9), (2000, 0.00), (2001, 3.91), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.47), (1999, 0.00), (2000, 4.38), (2001, 0.00), (2002,
1.74), (2003, 4.70), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.28), (1997, 0.28), (1998, 0.28), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.47), (2000, 1.45), (2001, 1.43), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 7.10), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.79), (1997, 0.79), (1998, 0.78), (1999, 5.43), (2000, 5.15), (2001, 4.90), (2002,
0.00), (2003, 0.00), (2004, 5.06), (2005, 4.82), (2006, 4.59), (2007, 4.39), (2008, 4.21), (2009, 4.04),
(2010, 3.88), (2011, 3.74), (2012, 3.60), (2013, 3.48), (2014, 3.36), (2015, 0.00)
delta_tanpa air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00, (1998, 0.00), (1999, 3.09), (2000, 3.19), (2001, 3.29), (2002,
0.00), (2003, 0.00), (2004, 3.40), (2005, 3.29), (2006, 3.19), (2007, 3.09), (2008, 3.00), (2009, 2.91),
(2010, 2.83), (2011, 2.75), (2012, 2.67), (2013, 2.61), (2014, 2.54), (2015, 0.00)
delta__menlnggal seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.13), (2000, 1.14), (2001, 1.15), (2002,
0.00), (2003, 0.00), (2004, 1.19), (2005, 1.17), (2006, 1.16), (2007, 1.15), (2008, 1.13), (2009, 1.12),
(2010, 1.11), (2011, 1.10), (2012, 1.09), (2013, 1.07), (2014, 1.06), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio TKK = GRAPH(time)
(1995, 1.12), (1996, 1.12), (1997, 1.12), (1998, 1.12), (1999, 1.13), (2000, 1.09), (2001, 1.09), (2002,
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1.12), (2003, 1.13), (2004, 1.13), (2005, 1.13), (2006, 1.13), (2007, 1.13), (2008, 1.13), (2009, 1.13),
(2010, 1.13), (2011, 1.13), (2012, 1.13), (2013, 1.13), (2014, 1.13), (2015, 1.13)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.41), (2005, 1.39), (2006, 1.37), (2007, 1.35), (2008, 1.34), (2009, 1.32),
(2010, 1.30), (2011, 1.29), (2012, 1.27), (2013, 1.25), (2014, 1.24), (2015, 0.00)
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KABUPATEN PACITAN:

SKENARIO 1.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 19.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 68.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.67
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 300553
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_PE_KAP = 586.5
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 47.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

```
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2 konsum_per_kapita_UNDP = 360000/1000
total delta_kk = EKK*total_delta_konsum_per_kapita
delta_paita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.1), (2000, 12.5), (2001, 14.3), (2002,
0.00), (2003, 0.00), (2004, 2.49), (2005, 2.49), (2006, 2.49), (2007, 2.49), (2008, 2.49), (2009, 2.49),
(2010, 2.49), (2011, 2.49), (2012, 2.49), (2013, 2.49), (2014, 2.49), (2015, 2.49)
delta_fas kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 8.72), (2005, 8.72), (2006, 8.72), (2007, 8.72), (2008, 8.72), (2009, 8.72),
(2010, 8.72), (2011, 8.72), (2012, 8.72), (2013, 8.72), (2014, 8.72), (2015, 8.72)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.1), (2000, 15.3), (2001, 13.3), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.54), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.78), (1997, 0.78), (1998, 0.77), (1999, 0.1), (2000, 0.1), (2001, 0.1), (2002, 1.29),
(2003, 1.02), (2004, 1.02), (2005, 1.02), (2006, 1.02), (2007, 1.02), (2008, 1.02), (2009, 1.02),
(2010, 1.02), (2011, 1.02), (2012, 1.02), (2013, 1.02), (2014, 1.02), (2015, 1.02)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.50), (2005, 1.50), (2006, 1.50), (2007, 1.50), (2008, 1.50), (2009, 1.50),
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(2010, 1.50), (2011, 1.50), (2012, 1.50), (2013, 1.50), (2014, 1.50), (2015, 1.50)

SKENARIO 2.

```
BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 19.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 68.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = (HARPN_HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.67
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 300553
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_PE_KAP = 586.5
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 5
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA_SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 47.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_tanpa_air_bersih1 = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks_harapan_hidup = (HARPN_HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks_lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per_kapita_UNDP-KONSM_PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA_KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

MELEK HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.1), (2000, 12.5), (2001, 14.3), (2002, 0.00), (2003, 0.00), (2004, 8.44), (2005, 8.44), (2006, 8.44), (2007, 8.44), (2008, 8.44), (2009, 8.44), (2010, 8.44), (2011, 8.44), (2012, 8.44), (2013, 8.44), (2014, 8.44), (2015, 8.44)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 14.3), (2005, 14.3), (2006, 14.3), (2007, 14.3), (2008, 14.3), (2009, 14.3), (2010, 14.3), (2011, 14.3), (2012, 14.3),
(2013, 14.3), (2014, 14.3), (2015, 14.3)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.1), (2000, 15.3), (2001, 13.3), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 2.54), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.78), (1997, 0.78), (1998, 0.77), (1999, 0.1), (2000, 0.1), (2001, 0.1), (2002, 1.29), (2003, 0.00), (2004, 0.746), (2005, 0.746), (2006, 0.746), (2007, 0.746), (2008, 0.746), (2009, 0.746), (2010, 0.746), (2011, 0.746), (2012, 0.746), (2013, 0.746), (2014, 0.746), (2015, 0.746)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 1.57), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.21), (1996, 0.81), (1997, 0.8), (1998, 0.8), (1999, 0.92), (2000, 0.91), (2001, 0.9), (2002, 1.19), (2003, 0.00), (2004, 2.42), (2005, 2.42), (2006, 2.42), (2007, 2.42), (2008, 2.42), (2009, 2.42), (2010, 2.42), (2011, 2.42), (2012, 2.42), (2013, 2.42), (2014, 2.42), (2015, 2.42)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.44), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 3.82), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.38), (2000, 2.32), (2001, 0.00), (2002, 1.29), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.21), (1997, 0.21), (1998, 0.21), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.64), (2000, 0.64), (2001, 0.63), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00),
(2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 7.33), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.00), (1997, 1.96), (1998, 1.92), (1999, 4.40), (2000, 4.22), (2001, 4.05), (2002, 0.00), (2003, 0.00), (2004, 7.24), (2005, 7.24), (2006, 7.24), (2007, 7.24), (2008, 7.24), (2009, 7.24), (2010, 7.24), (2011, 7.24), (2012, 7.24), (2013, 7.24), (2014, 7.24), (2015, 7.24)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.81), (2000, 8.47), (2001, 9.26), (2002, 0.00), (2003, 0.00), (2004, 16.6), (2005, 16.6), (2006, 16.6), (2007, 16.6), (2008, 16.6), (2009, 16.6), (2010, 16.6), (2011, 16.6), (2012, 16.6), (2013, 16.6), (2014, 16.6), (2015, 16.6)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.69), (2000, 0.7), (2001, 0.7), (2002, 0.00), (2003, 0.00), (2004, 5.58), (2005, 5.58), (2006, 5.58), (2007, 5.58), (2008, 5.58), (2009, 5.58), (2010, 5.58), (2011, 5.58), (2012, 5.58), (2013, 5.58), (2014, 5.58), (2015, 5.58)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.01), (1996, 1.01), (1997, 1.01), (1998, 1.01), (1999, 1.02), (2000, 1.01), (2001, 1.01), (2002, 1.02), (2003, 1.02), (2004, 1.02), (2005, 1.02), (2006, 1.02), (2007, 1.02), (2008, 1.02), (2009, 1.02), (2010, 1.02), (2011, 1.02), (2012, 1.02), (2013, 1.02), (2014, 1.02), (2015, 1.02)
total_delta_konsum_per_kapita = GRAPH(time)

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.70), (2005, 1.70), (2006, 1.70), (2007, 1.70), (2008, 1.70), (2009, 1.70), (2010, 1.70), (2011, 1.70), (2012, 1.70), (2013, 1.70), (2014, 1.70), (2015, 1.70)

SKENARIO 3.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 19.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta balita _kur_gizi*BALITA KR GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 68.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = (HARPN_HIDUP*delta harapan hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.67
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 300553
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f delta konsum per kapita) * dt
INIT KONSM PE_KAP = 586.5
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapta/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA SEKLAH = 5
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f delta lama sekolah = (LAMA_SEKLAH*delta_lama_sekolah)/100
MGL_SB_40 THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal seb 40 th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 47.8
INFLOWS:
f_delta_tanpa air bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.7
INFLOWS:
f_delta_fas_kes1 = TDK DPT FAS KES*delta_fas_kesL/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA HURUF = 100-MELEK_HURUF
delta_balita_kur gizi = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai min2 konsum per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum per kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai maks konsum_per__kapita_UNDP-KONSM__PE_KAP
lama sekolah_maks_UNDP = 15

layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.1), (2000, 12.5), (2001, 14.3), (2002,
0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0),
(2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0),
(2013, 55.0), (2014, 55.0), (2015, 55.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.1), (2000, 15.3), (2001, 13.3), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.54), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.78), (1997, 0.78), (1998, 0.77), (1999, 0.1), (2000, 0.1), (2001, 0.1), (2002, 1.29),
(2003, 0.00), (2004, 1.34), (2005, 1.34), (2006, 1.34), (2007, 1.34), (2008, 1.34), (2009, 1.34), (2010,
1.34), (2011, 1.34), (2012, 1.34), (2013, 1.34), (2014, 1.34), (2015, 1.34)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.57), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.21), (1996, 0.81), (1997, 0.8), (1998, 0.8), (1999, 0.92), (2000, 0.91), (2001, 0.9), (2002, 1.19),
(2003, 0.00), (2004, 3.19), (2005, 3.19), (2006, 3.19), (2007, 3.19), (2008, 3.19), (2009, 3.19), (2010,
3.19), (2011, 3.19), (2012, 3.19), (2013, 3.19), (2014, 3.19), (2015, 3.19)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.44), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 3.82), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.38), (2000, 2.32), (2001, 0.00), (2002,
1.29), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.21), (1997, 0.21), (1998, 0.21), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.64), (2000, 0.64), (2001, 0.63), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 7.33), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.00), (1997, 1.96), (1998, 1.92), (1999, 4.40), (2000, 4.22), (2001, 4.05), (2002,
0.00), (2003, 0.00), (2004, 9.44), (2005, 9.44), (2006, 9.44), (2007, 9.44), (2008, 9.44), (2009, 9.44),
(2010, 9.44), (2011, 9.44), (2012, 9.44), (2013, 9.44), (2014, 9.44), (2015, 9.44)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.81), (2000, 8.47), (2001, 9.26), (2002,
0.00), (2003, 0.00), (2004, 56.0), (2005, 56.0), (2006, 56.0), (2007, 56.0), (2008, 56.0), (2009, 56.0),
(2010, 56.0), (2011, 56.0), (2012, 56.0), (2013, 56.0), (2014, 56.0), (2015, 56.0)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.69), (2000, 0.7), (2001, 0.7), (2002, 0.00),
(2003, 0.00), (2004, 50.0), (2005, 50.0), (2006, 50.0), (2007, 50.0), (2008, 50.0), (2009, 50.0), (2010,
50.0), (2011, 50.0), (2012, 50.0), (2013, 50.0), (2014, 50.0), (2015, 50.0)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.01), (1996, 1.01), (1997, 1.01), (1998, 1.01), (1999, 1.02), (2000, 1.01), (2001, 1.01), (2002,
1.02), (2003, 1.02), (2004, 1.02), (2005, 1.02), (2006, 1.02), (2007, 1.02), (2008, 1.02), (2009, 1.02),
(2010, 1.02), (2011, 1.02), (2012, 1.02), (2013, 1.02), (2014, 1.02), (2015, 1.02)

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.89), (2005, 1.89), (2006, 1.89), (2007, 1.89), (2008, 1.89), (2009, 1.89), (2010, 1.89), (2011, 1.89), (2012, 1.89), (2013, 1.89), (2014, 1.89), (2015, 1.89)

REALITAS.
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 19.8
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 68.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = (HARPN__HIDUP*delta_harapan_hidup)/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.67
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 300553
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 586.5
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = (LAMA__SEKLAH*delta_lama_sekolah)/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 47.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_tanpa_air_bersih1 = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
Indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks_lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM_PE_KAP

lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_ harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.1), (2000, 12.5), (2001, 14.3), (2002, 0.00), (2003, 0.00), (2004, 16.7), (2005, 14.3), (2006, 12.5), (2007, 11.1), (2008, 10.0), (2009, 9.09), (2010, 8.33), (2011, 7.69), (2012, 7.14), (2013, 6.67), (2014, 6.25), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 4.65), (2005, 4.45), (2006, 4.26), (2007, 4.08), (2008, 3.92), (2009, 3.77), (2010, 3.64), (2011, 3.51), (2012, 3.39),
(2013, 3.28), (2014, 3.17), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.1), (2000, 15.3), (2001, 13.3), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 2.54), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.78), (1997, 0.78), (1998, 0.77), (1999, 0.1), (2000, 0.1), (2001, 0.1), (2002, 1.29), (2003, 0.00), (2004, 0.101), (2005, 0.101), (2006, 0.101), (2007, 0.101), (2008, 0.101), (2009, 0.101), (2010, 0.101), (2011, 0.101), (2012, 0.101), (2013, 0.1), (2014, 0.1), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 1.57), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.21), (1996, 0.81), (1997, 0.8), (1998, 0.8), (1999, 0.92), (2000, 0.91), (2001, 0.9), (2002, 1.19), (2003, 0.00), (2004, 0.902), (2005, 0.894), (2006, 0.886), (2007, 0.878), (2008, 0.87), (2009, 0.863), (2010, 0.855), (2011, 0.848), (2012, 0.841), (2013, 0.834), (2014, 0.827), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.44), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 3.82), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.38), (2000, 2.32), (2001, 0.00), (2002, 1.29), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.21), (1997, 0.21), (1998, 0.21), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.64), (2000, 0.64), (2001, 0.63), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 7.33), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.00), (1997, 1.96), (1998, 1.92), (1999, 4.40), (2000, 4.22), (2001, 4.05), (2002, 0.00), (2003, 0.00), (2004, 4.14), (2005, 3.97), (2006, 3.82), (2007, 3.68), (2008, 3.55), (2009, 3.43), (2010, 3.31), (2011, 3.21), (2012, 3.11), (2013, 3.01), (2014, 2.93), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.81), (2000, 8.47), (2001, 9.26), (2002, 0.00), (2003, 0.00), (2004, 10.2), (2005, 9.25), (2006, 8.47), (2007, 7.80), (2008, 7.24), (2009, 6.75), (2010, 6.32), (2011, 5.95), (2012, 5.61), (2013, 5.32), (2014, 5.05), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.69), (2000, 0.7), (2001, 0.7), (2002, 0.00), (2003, 0.00), (2004, 0.745), (2005, 0.739), (2006, 0.734), (2007, 0.728), (2008, 0.723), (2009, 0.718), (2010, 0.713), (2011, 0.708), (2012, 0.703), (2013, 0.698), (2014, 0.693), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.01), (1996, 1.01), (1997, 1.01), (1998, 1.01), (1999, 1.02), (2000, 1.01), (2001, 1.01), (2002, 1.02), (2003, 1.02), (2004, 1.02), (2005, 1.02), (2006, 1.02), (2007, 1.02), (2008, 1.02), (2009, 1.02),

(2010, 1.02), (2011, 1.02), (2012, 1.02), (2013, 1.02), (2014, 1.02), (2015, 1.02)
total delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.628), (2005, 0.624), (2006, 0.62), (2007, 0.616), (2008, 0.613), (2009, 0.609), (2010, 0.605), (2011, 0.602), (2012, 0.598), (2013, 0.594), (2014, 0.591), (2015, 0.00)

KABUPATEN TULUNGAGUNG:

SKENARIO 1.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 17.5
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 70
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 65.76
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 450050
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 593
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.8
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 54.7
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 14.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_lama_sekolah = 0
delta__meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__ hidup-4.5*1/3*Indeks pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__ kapita_UNDP = 732720/1000
nilai_min1_konsum_per _kapita_UNDP = 300000/1000
nilai_min2_konsum per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.77), (2001, 0.77), (2002, 0.00), (2003, 0.00), (2004, 4.76), (2005, 4.76), (2006, 4.76), (2007, 4.76), (2008, 4.76), (2009, 4.76), (2010, 4.76), (2011, 4.76), (2012, 4.76), (2013, 4.76), (2014, 4.76), (2015, 4.76)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 5.34), (2005, 5.34), (2006, 5.34), (2007, 5.34), (2008, 5.34), (2009, 5.34), (2010, 5.34), (2011, 5.34), (2012, 5.34), (2013, 5.34), (2014, 5.34), (2015, 5.34)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.93), (2000, 9.03), (2001, 8.28), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 2.99), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.05), (1997, 0.05), (1998, 0.05), (1999, 0.1), (2000, 0.1), (2001, 0.09), (2002, 0.00), (2003, 0.00), (2004, 0.236), (2005, 0.236), (2006, 0.236), (2007, 0.236), (2008, 0.236), (2009, 0.236), (2010, 0.236), (2011, 0.236), (2012, 0.236), (2013, 0.236), (2014, 0.236), (2015, 0.236)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.29), (1997, 0.29), (1998, 0.29), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 1.32), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.11), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.87), (2000, 0.86), (2001, 0.86), (2002, 0.12), (2003, 0.00), (2004, 1.40), (2005, 1.40), (2006, 1.40), (2007, 1.40), (2008, 1.40), (2009, 1.40), (2010, 1.40), (2011, 1.40), (2012, 1.40), (2013, 1.40), (2014, 1.40), (2015, 1.40)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.32), (1999, 4.67), (2000, 0.00), (2001, 8.17), (2002, 0.00), (2003, 6.98), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 14.2), (2001, 0.00), (2002, 8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.37), (1997, 0.37), (1998, 0.37), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.45), (2000, 0.45), (2001, 0.44), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.72), (1997, 1.69), (1998, 1.67), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002, 0.00), (2003, 3.94), (2004, 2.50), (2005, 2.50), (2006, 2.50), (2007, 2.50), (2008, 2.50), (2009, 2.50), (2010, 2.50), (2011, 2.50), (2012, 2.50), (2013, 2.50), (2014, 2.50), (2015, 2.50)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.5), (2001, 15.6), (2002, 0.00), (2003, 0.00), (2004, 10.8), (2005, 10.8), (2006, 10.8), (2007, 10.8), (2008, 10.8), (2009, 10.8), (2010, 10.8), (2011, 10.8), (2012, 10.8), (2013, 10.8), (2014, 10.8), (2015, 10.8)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta _meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.36), (2000, 0.36), (2001, 0.36), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002, 1.05), (2003, 1.05), (2004, 1.05), (2005, 1.05), (2006, 1.05), (2007, 1.05), (2008, 1.05), (2009, 1.05), (2010, 1.05), (2011, 1.05), (2012, 1.05), (2013, 1.05), (2014, 1.05), (2015, 1.05)
total_delta_konsum_per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.50), (2005, 1.50), (2006, 1.50), (2007, 1.50), (2008, 1.50), (2009, 1.50),

(2010, 1.50), (2011, 1.50), (2012, 1.50), (2013, 1.50), (2014, 1.50), (2015, 1.50)

SKENARIO 2.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 17.5
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 70
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 65.76
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 450050
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 593
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.8
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 54.7
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 14.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_lama_sekolah = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
```

MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_ harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per_ kapita_UNDP = 300000/1000
nilai_min2 konsum_per _kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.77), (2001, 0.77), (2002,
0.00), (2003, 0.00), (2004, 10.6), (2005, 10.6), (2006, 10.6), (2007, 10.6), (2008, 10.6), (2009, 10.6),
(2010, 10.6), (2011, 10.6), (2012, 10.6), (2013, 10.6), (2014, 10.6), (2015, 10.6)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 11.1), (2005, 11.1), (2006, 11.1), (2007, 11.1), (2008, 11.1), (2009, 11.1),
(2010, 11.1), (2011, 11.1), (2012, 11.1),
(2013, 11.1), (2014, 11.1), (2015, 11.1)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.93), (2000, 9.03), (2001, 8.28), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.99), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.05), (1997, 0.05), (1998, 0.05), (1999, 0.1), (2000, 0.1), (2001, 0.09), (2002, 0.00),
(2003, 0.00), (2004, 0.867), (2005, 0.867), (2006, 0.867), (2007, 0.867), (2008, 0.867), (2009, 0.867),
(2010, 0.867), (2011, 0.867), (2012, 0.867), (2013, 0.867), (2014, 0.867), (2015, 0.867)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.29), (1997, 0.29), (1998, 0.29), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.32), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.11), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.87), (2000, 0.86), (2001, 0.86), (2002,
0.12), (2003, 0.00), (2004, 2.23), (2005, 2.23), (2006, 2.23), (2007, 2.23), (2008, 2.23), (2009, 2.23),
(2010, 2.23), (2011, 2.23), (2012, 2.23), (2013, 2.23), (2014, 2.23), (2015, 2.23)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.32), (1999, 4.67), (2000, 0.00), (2001, 8.17), (2002,
0.00), (2003, 6.98), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 14.2), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.37), (1997, 0.37), (1998, 0.37), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.45), (2000, 0.45), (2001, 0.44), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.72), (1997, 1.69), (1998, 1.67), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 3.94), (2004, 5.21), (2005, 5.21), (2006, 5.21), (2007, 5.21), (2008, 5.21), (2009, 5.21),
(2010, 5.21), (2011, 5.21), (2012, 5.21), (2013, 5.21), (2014, 5.21), (2015, 5.21)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.5), (2001, 15.6), (2002,
0.00), (2003, 0.00), (2004, 16.3), (2005, 16.3), (2006, 16.3), (2007, 16.3), (2008, 16.3), (2009, 16.3),
(2010, 16.3), (2011, 16.3), (2012, 16.3), (2013, 16.3), (2014, 16.3), (2015, 16.3)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.36), (2000, 0.36), (2001, 0.36), (2002,
0.00), (2003, 0.00), (2004, 5.30), (2005, 5.30), (2006, 5.30), (2007, 5.30), (2008, 5.30), (2009, 5.30),
(2010, 5.30), (2011, 5.30), (2012, 5.30), (2013, 5.30), (2014, 5.30), (2015, 5.30)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.05), (2004, 1.05), (2005, 1.05), (2006, 1.05), (2007, 1.05), (2008, 1.05), (2009, 1.05),
(2010, 1.05), (2011, 1.05), (2012, 1.05), (2013, 1.05), (2014, 1.05), (2015, 1.05)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,

0.00), (2003, 0.00), (2004, 1.69), (2005, 1.69), (2006, 1.69), (2007, 1.69), (2008, 1.69), (2009, 1.69), (2010, 1.69), (2011, 1.69), (2012, 1.69), (2013, 1.69), (2014, 1.69), (2015, 1.69)

SKENARIO 3.

```
BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 17.5
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 70
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 65.76
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 450050
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_PE_KAP = 593
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 5.8
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 54.7
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 14.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_lama_sekolah = 0
delta_meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks_harapan_hidup = (HARPN_HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks_lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per_kapita_UNDP-KONSM_PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA_KR_GIZI)
```

```
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.77), (2001, 0.77), (2002,
0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0),
(2010, 53.0), (2011, 53.0), (2012, 53.0), (2013, 53.0), (2014, 53.0), (2015, 53.0)
della fas kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0),
(2010, 53.0), (2011, 53.0), (2012, 53.0),
(2013, 53.0), (2014, 53.0), (2015, 53.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.93), (2000, 9.03), (2001, 8.28), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.99), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.05), (1997, 0.05), (1998, 0.05), (1999, 0.1), (2000, 0.1), (2001, 0.09), (2002, 0.00),
(2003, 0.00), (2004, 1.46), (2005, 1.46), (2006, 1.46), (2007, 1.46), (2008, 1.46), (2009, 1.46), (2010,
1.46), (2011, 1.46), (2012, 1.46), (2013, 1.46), (2014, 1.46), (2015, 1.46)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.29), (1997, 0.29), (1998, 0.29), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.32), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.11), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.87), (2000, 0.86), (2001, 0.86), (2002,
0.12), (2003, 0.00), (2004, 2.99), (2005, 2.99), (2006, 2.99), (2007, 2.99), (2008, 2.99), (2009, 2.99),
(2010, 2.99), (2011, 2.99), (2012, 2.99), (2013, 2.99), (2014, 2.99), (2015, 2.99)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.32), (1999, 4.67), (2000, 0.00), (2001, 8.17), (2002,
0.00), (2003, 6.98), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 14.2), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.37), (1997, 0.37), (1998, 0.37), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_perkapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.45), (2000, 0.45), (2001, 0.44), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.72), (1997, 1.69), (1998, 1.67), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 3.94), (2004, 7.38), (2005, 7.38), (2006, 7.38), (2007, 7.38), (2008, 7.38), (2009, 7.38),
(2010, 7.38), (2011, 7.38), (2012, 7.38), (2013, 7.38), (2014, 7.38), (2015, 7.38)
delta_tanpa air bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.5), (2001, 15.6), (2002,
0.00), (2003, 0.00), (2004, 56.0), (2005, 56.0), (2006, 56.0), (2007, 56.0), (2008, 56.0), (2009, 56.0),
(2010, 56.0), (2011, 56.0), (2012, 56.0), (2013, 56.0), (2014, 56.0), (2015, 56.0)
delta_tanpa air bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tb = GRAPH(TIME)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.36), (2000, 0.36), (2001, 0.36), (2002,
0.00), (2003, 0.00), (2004, 50.0), (2005, 50.0), (2006, 50.0), (2007, 50.0), (2008, 50.0), (2009, 50.0),
(2010, 50.0), (2011, 50.0), (2012, 50.0), (2013, 50.0), (2014, 50.0), (2015, 50.0)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.05), (2004, 1.05), (2005, 1.05), (2006, 1.05), (2007, 1.05), (2008, 1.05), (2009, 1.05),
(2010, 1.05), (2011, 1.05), (2012, 1.05), (2013, 1.05), (2014, 1.05), (2015, 1.05)
total_delta_konsum_per_kapita = GRAPH(time)
```

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.89), (2005, 1.89), (2006, 1.89), (2007, 1.89), (2008, 1.89), (2009, 1.89), (2010, 1.89), (2011, 1.89), (2012, 1.89), (2013, 1.89), (2014, 1.89), (2015, 1.89)

REALITAS.

BALITA_ KR_GIZI(t) = BALITA__KR GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR GIZI = 17.5
INFLOWS:
f_delta_balita kur_gizi1 = BALITA__KR_GIZI*delta balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_ gizi = delta_balita __kur_gizi*BALITA _KR_GIZI/100
HARPN_ _HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta harapan hidup1 - f_delta_ harapan hidup) * dt
INIT HARPN__HIDUP = 70
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_ HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 65.76
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT KERJA = 450050
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT KERJA*total_delta kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 593
INFLOWS:
f_delta_konsum_per_kapita1 = (KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.8
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA _SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_ _meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 9.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta_ _meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 54.7
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 14.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
delta_lama_sekolah = 0
delta _meninggal_seb_40_th1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15

layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks _harapan _hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per_ kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita _kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.77), (2001, 0.77), (2002,
0.00), (2003, 0.00), (2004, 0.76), (2005, 0.754), (2006, 0.749), (2007, 0.743), (2008, 0.738), (2009, 0.732),
(2010, 0.727), (2011, 0.722), (2012, 0.717), (2013, 0.712), (2014, 0.707), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 6.94), (2005, 6.49), (2006, 6.09), (2007, 5.74), (2008, 5.43), (2009, 5.15),
(2010, 4.90), (2011, 4.67), (2012, 4.46),
(2013, 4.27), (2014, 4.10), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.93), (2000, 9.03), (2001, 8.28), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 2.99), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.05), (1997, 0.05), (1998, 0.05), (1999, 0.1), (2000, 0.1), (2001, 0.09), (2002, 0.00),
(2003, 0.00), (2004, 0.103), (2005, 0.102), (2006, 0.102), (2007, 0.102), (2008, 0.102), (2009, 0.102),
(2010, 0.102), (2011, 0.102), (2012, 0.102), (2013, 0.102), (2014, 0.102), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.29), (1997, 0.29), (1998, 0.29), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.32), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.11), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.87), (2000, 0.86), (2001, 0.86), (2002,
0.12), (2003, 0.00), (2004, 0.673), (2005, 0.669), (2006, 0.665), (2007, 0.66), (2008, 0.656), (2009, 0.652),
(2010, 0.647), (2011, 0.643), (2012, 0.639), (2013, 0.635), (2014, 0.631), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.32), (1999, 4.67), (2000, 0.00), (2001, 8.17), (2002,
0.00), (2003, 6.98), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 14.2), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.37), (1997, 0.37), (1998, 0.37), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.45), (2000, 0.45), (2001, 0.44), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 1.72), (1997, 1.69), (1998, 1.67), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 3.94), (2004, 2.48), (2005, 2.42), (2006, 2.36), (2007, 2.31), (2008, 2.25), (2009, 2.20),
(2010, 2.16), (2011, 2.11), (2012, 2.07), (2013, 2.03), (2014, 1.99), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.5), (2001, 15.6), (2002,
0.00), (2003, 0.00), (2004, 9.23), (2005, 8.45), (2006, 7.79), (2007, 7.23), (2008, 6.74), (2009, 6.32),
(2010, 5.94), (2011, 5.61), (2012, 5.31), (2013, 5.04), (2014, 4.80), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta _meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.36), (2000, 0.36), (2001, 0.36), (2002,
0.00), (2003, 0.00), (2004, 0.33), (2005, 0.329), (2006, 0.328), (2007, 0.326), (2008, 0.325), (2009, 0.324),
(2010, 0.323), (2011, 0.322), (2012, 0.321), (2013, 0.32), (2014, 0.319), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002,
1.05), (2003, 1.05), (2004, 1.05), (2005, 1.05), (2006, 1.05), (2007, 1.05), (2008, 1.05), (2009, 1.05),
(2010, 1.05), (2011, 1.05), (2012, 1.05), (2013, 1.05), (2014, 1.05), (2015, 1.05)

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.443), (2005, 0.441), (2006, 0.439), (2007, 0.437), (2008, 0.435), (2009, 0.433), (2010, 0.431), (2011, 0.429), (2012, 0.427), (2013, 0.425), (2014, 0.424), (2015, 0.00)

KABUPATEN JEMBER:

SKENARIO 1.

BALITA_ KR_GIZI(t) = BALITA _KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33.1
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_ KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN_ HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 58.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_ HIDUP)/100
OUTFLOWS:
f_delta_ harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 55.06
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 964811
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM _PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_ PE_KAP = 581.9
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM _PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 4.4
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 26.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta_ meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 44.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 27.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
Indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_ kapita_UNDP))*100
indeks__harapan__hidup = (HARPN _HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
Indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM _PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan _hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)

rasio_TKK = GRAPH(time)
(1995, 1.03), (1996, 1.03), (1997, 1.03), (1998, 1.03), (1999, 1.03), (2000, 1.04), (2001, 1.04), (2002, 1.03), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.63), (2005, 1.63), (2006, 1.63), (2007, 1.63), (2008, 1.63), (2009, 1.63), (2010, 1.63), (2011, 1.63), (2012, 1.63), (2013, 1.63), (2014, 1.63), (2015, 1.63)

SKENARIO 2.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 33.1
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 58.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f hdi1 - f hdi) * dt
INIT HDI = 55.06
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 964811
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f delta kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 581.9
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 4.4
INFLOWS:
f delta lama sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 26.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 44.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta tanpa air bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 27.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks_harapan_hidup = (HARPN_HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min harapan hidup_UNDP)*100
indeks_lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah maks UNDP-0))*100

```
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks  lama sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 3600000/1000
total_delta_KK = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.92), (2000, 3.01), (2001, 3.10), (2002,
0.00), (2003, 0.00), (2004, 15.1), (2005, 15.1), (2006, 15.1), (2007, 15.1), (2008, 15.1), (2009, 15.1),
(2010, 15.1), (2011, 15.1), (2012, 15.1), (2013, 15.1), (2014, 15.1), (2015, 15.1)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 14.6), (2005, 14.6), (2006, 14.6), (2007, 14.6), (2008, 14.6), (2009, 14.6),
(2010, 14.6), (2011, 14.6), (2012, 14.6), (2013, 14.6), (2014, 14.6), (2015, 14.6)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.60), (2000, 1.57), (2001, 1.55), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.51), (1997, 0.51), (1998, 0.51), (1999, 0.11), (2000, 0.11), (2001, 0.11), (2002, 0.5),
(2003, 0.00), (2004, 2.04), (2005, 2.04), (2006, 2.04), (2007, 2.04), (2008, 2.04), (2009, 2.04), (2010,
2.04), (2011, 2.04), (2012, 2.04), (2013, 2.04), (2014, 2.04), (2015, 2.04)
delta_hdi = GRAPH(time)
(1995, 1.13), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.03), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.25), (1997, 0.25), (1998, 0.25), (1999, 2.01), (2000, 1.97), (2001, 1.93), (2002,
0.52), (2003, 0.00), (2004, 3.48), (2005, 3.48), (2006, 3.48), (2007, 3.48), (2008, 3.48), (2009, 3.48),
(2010, 3.48), (2011, 3.48), (2012, 3.48), (2013, 3.48), (2014, 3.48), (2015, 3.48)
delta kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.52), (2000, 0.00), (2001, 0.00), (2002,
1.57), (2003, 3.95), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.51), (1999, 0.00), (2000, 5.74), (2001, 1.30), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.66), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.89), (2000, 0.89), (2001, 0.88), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.45), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.33), (2000, 7.69), (2001, 7.14), (2002,
0.00), (2003, 0.00), (2004, 7.49), (2005, 7.49), (2006, 7.49), (2007, 7.49), (2008, 7.49), (2009, 7.49),
(2010, 7.49), (2011, 7.49), (2012, 7.49), (2013, 7.49), (2014, 7.49), (2015, 7.49)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 18.4), (2005, 18.4), (2006, 18.4), (2007, 18.4), (2008, 18.4), (2009, 18.4),
(2010, 18.4), (2011, 18.4), (2012, 18.4), (2013, 18.4), (2014, 18.4), (2015, 18.4)
delta_tanpa air bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.50), (2000, 1.48), (2001, 1.45), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.38), (2000, 0.38), (2001, 0.38), (2002,
0.00), (2003, 0.00), (2004, 13.9), (2005, 13.9), (2006, 13.9), (2007, 13.9), (2008, 13.9), (2009, 13.9),
(2010, 13.9), (2011, 13.9), (2012, 13.9), (2013, 13.9), (2014, 13.9), (2015, 13.9)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
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0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.03), (1996, 1.03), (1997, 1.03), (1998, 1.03), (1999, 1.03), (2000, 1.04), (2001, 1.04), (2002, 1.03), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.83), (2005, 1.83), (2006, 1.83), (2007, 1.83), (2008, 1.83), (2009, 1.83), (2010, 1.83), (2011, 1.83), (2012, 1.83), (2013, 1.83), (2014, 1.83), (2015, 1.83)

SKENARIO 3.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33.1
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 58.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 55.06
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 964811
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 581.9
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 4.4
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 26.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 44.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 27.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))

```
indeks pendapatan = ((KONSM  PE KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks pendapatan-
4.5*1/9*indeks__lama_sekolah)
min harapan hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.92), (2000, 3.01), (2001, 3.10), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.60), (2000, 1.57), (2001, 1.55), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.60), (2000, 1.57), (2001, 1.55), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.51), (1997, 0.51), (1998, 0.51), (1999, 0.11), (2000, 0.11), (2001, 0.11), (2002, 0.5),
(2003, 0.00), (2004, 2.65), (2005, 2.65), (2006, 2.65), (2007, 2.65), (2008, 2.65), (2009, 2.65), (2010,
2.65), (2011, 2.65), (2012, 2.65), (2013, 2.65), (2014, 2.65), (2015, 2.65)
delta_hdi = GRAPH(time)
(1995, 1.13), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.03), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.25), (1997, 0.25), (1998, 0.25), (1999, 2.01), (2000, 1.97), (2001, 1.93), (2002,
0.52), (2003, 0.00), (2004, 4.25), (2005, 4.25), (2006, 4.25), (2007, 4.25), (2008, 4.25), (2009, 4.25),
(2010, 4.25), (2011, 4.25), (2012, 4.25), (2013, 4.25), (2014, 4.25), (2015, 4.25)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.52), (2000, 0.00), (2001, 0.00), (2002,
1.57), (2003, 3.95), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.51), (1999, 0.00), (2000, 5.74), (2001, 1.30), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.66), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.89), (2000, 0.89), (2001, 0.88), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.45), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.33), (2000, 7.69), (2001, 7.14), (2002,
0.00), (2003, 0.00), (2004, 9.69), (2005, 9.69), (2006, 9.69), (2007, 9.69), (2008, 9.69), (2009, 9.69),
(2010, 9.69), (2011, 9.69), (2012, 9.69), (2013, 9.69), (2014, 9.69), (2015, 9.69)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 57.0), (2005, 57.0), (2006, 57.0), (2007, 57.0), (2008, 57.0), (2009, 57.0),
(2010, 57.0), (2011, 57.0), (2012, 57.0), (2013, 57.0), (2014, 57.0), (2015, 57.0)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.50), (2000, 1.48), (2001, 1.45), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
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delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.38), (2000, 0.38), (2001, 0.38), (2002, 0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0), (2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)

delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)

rasio TKK = GRAPH(time)
(1995, 1.03), (1996, 1.03), (1997, 1.03), (1998, 1.03), (1999, 1.03), (2000, 1.04), (2001, 1.04), (2002, 1.03), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 2.02), (2005, 2.02), (2006, 2.02), (2007, 2.02), (2008, 2.02), (2009, 2.02), (2010, 2.02), (2011, 2.02), (2012, 2.02), (2013, 2.02), (2014, 2.02), (2015, 2.02)

REALITAS.
BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 33.1
INFLOWS:
f_delta_balita_kur_gizi = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 58.8
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 55.06
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 964811
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 581.9
INFLOWS:
f_delta_konsum_per_kapita1 = (KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 4.4
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 26.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 44.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 27.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
```

OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
Indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.92), (2000, 3.01), (2001, 3.10), (2002,
0.00), (2003, 0.00), (2004, 3.21), (2005, 3.11), (2006, 3.02), (2007, 2.93), (2008, 2.85), (2009, 2.77),
(2010, 2.69), (2011, 2.62), (2012, 2.56), (2013, 2.49), (2014, 2.43), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.51), (2005, 1.49), (2006, 1.47), (2007, 1.45), (2008, 1.43), (2009, 1.41),
(2010, 1.39), (2011, 1.37), (2012, 1.35), (2013, 1.33), (2014, 1.31), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.60), (2000, 1.57), (2001, 1.55), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.28), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.51), (1997, 0.51), (1998, 0.51), (1999, 0.11), (2000, 0.11), (2001, 0.11), (2002, 0.5),
(2003, 0.00), (2004, 0.117), (2005, 0.117), (2006, 0.116), (2007, 0.116), (2008, 0.116), (2009, 0.116),
(2010, 0.116), (2011, 0.116), (2012, 0.116), (2013, 0.115), (2014, 0.115), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 1.13), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.03), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.00), (1996, 0.25), (1997, 0.25), (1998, 0.25), (1999, 2.01), (2000, 1.97), (2001, 1.93), (2002,
0.52), (2003, 0.00), (2004, 1.37), (2005, 1.35), (2006, 1.33), (2007, 1.31), (2008, 1.30), (2009, 1.28),
(2010, 1.26), (2011, 1.25), (2012, 1.23), (2013, 1.22), (2014, 1.20), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.52), (2000, 0.00), (2001, 0.00), (2002,
1.57), (2003, 3.95), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 4.51), (1999, 0.00), (2000, 5.74), (2001, 1.30), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.66), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.89), (2000, 0.89), (2001, 0.88), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.45), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.33), (2000, 7.69), (2001, 7.14), (2002,
0.00), (2003, 0.00), (2004, 6.83), (2005, 6.39), (2006, 6.01), (2007, 5.67), (2008, 5.36), (2009, 5.09),
(2010, 4.84), (2011, 4.62), (2012, 4.42), (2013, 4.23), (2014, 4.06), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,

0.00), (2003, 0.00), (2004, 1.44), (2005, 1.42), (2006, 1.40), (2007, 1.38), (2008, 1.36), (2009, 1.34),
(2010, 1.33), (2011, 1.31), (2012, 1.29), (2013, 1.28), (2014, 1.26), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.50), (2000, 1.48), (2001, 1.45), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.38), (2000, 0.38), (2001, 0.38), (2002,
0.00), (2003, 0.00), (2004, 0.385), (2005, 0.383), (2006, 0.382), (2007, 0.38), (2008, 0.379), (2009, 0.377),
(2010, 0.376), (2011, 0.375), (2012, 0.373), (2013, 0.372), (2014, 0.37), (2015, 0.00)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_IKK = GRAPH(time)
(1995, 1.03), (1996, 1.03), (1997, 1.03), (1998, 1.03), (1999, 1.03), (2000, 1.04), (2001, 1.04), (2002,
1.03), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03),
(2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total delta konsum per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.871), (2005, 0.863), (2006, 0.856), (2007, 0.849), (2008, 0.841), (2009,
0.834), (2010, 0.828), (2011, 0.821), (2012, 0.814), (2013, 0.808), (2014, 0.801), (2015, 0.00)

KABUPATEN BANYUWANGI:

SKENARIO 1.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 34.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 62.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 59.83
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 734868
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 592.9
INFLOWS:
f_delta_konsum_per_kapita1 = (KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 18.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 60.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
Indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*Indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-4.5*1/9*indeks__lama_sekolah)

```
min_harapan_hidup_UNDP = 25
nilai maks konsum per kapita UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum_per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.14), (2000, 8.86), (2001, 9.72), (2002,
0.00), (2003, 0.00), (2004, 8.32), (2005, 8.32), (2006, 8.32), (2007, 8.32), (2008, 8.32), (2009, 8.32),
(2010, 8.32), (2011, 8.32), (2012, 8.32), (2013, 8.32), (2014, 8.32), (2015, 8.32)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 5.44), (2005, 5.44), (2006, 5.44), (2007, 5.44), (2008, 5.44), (2009, 5.44),
(2010, 5.44), (2011, 5.44), (2012, 5.44),
(2013, 5.44), (2014, 5.44), (2015, 5.44)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.02), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.16), (2000, 0.16), (2001, 0.16), (2002,
3.22), (2003, 0.00), (2004, 0.458), (2005, 0.458), (2006, 0.458), (2007, 0.458), (2008, 0.458), (2009,
0.458), (2010, 0.458), (2011, 0.458), (2012, 0.458), (2013, 0.458), (2014, 0.458), (2015, 0.458)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00),
(2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.57), (1996, 0.3), (1997, 0.3), (1998, 0.3), (1999, 0.7), (2000, 0.69), (2001, 0.69), (2002, 2.11),
(2003, 0.63), (2004, 1.75), (2005, 1.75), (2006, 1.75), (2007, 1.75), (2008, 1.75), (2009, 1.75), (2010,
1.75), (2011, 1.75), (2012, 1.75), (2013, 1.75), (2014, 1.75), (2015, 1.75)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.52), (1999, 0.00), (2000, 0.34), (2001, 0.41), (2002,
0.00), (2003, 9.23), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.40), (2000, 0.00), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.55), (1997, 0.55), (1998, 0.55), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.46), (2000, 0.46), (2001, 0.46), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.56), (1997, 2.50), (1998, 2.44), (1999, 2.38), (2000, 2.33), (2001, 2.27), (2002,
0.00), (2003, 5.50), (2004, 3.25), (2005, 3.25), (2006, 3.25), (2007, 3.25), (2008, 3.25), (2009, 3.25),
(2010, 3.25), (2011, 3.25), (2012, 3.25), (2013, 3.25), (2014, 3.25), (2015, 3.25)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.15), (2000, 4.33), (2001, 4.52), (2002,
0.00), (2003, 0.00), (2004, 14.0), (2005, 14.0), (2006, 14.0), (2007, 14.0), (2008, 14.0), (2009, 14.0),
(2010, 14.0), (2011, 14.0), (2012, 14.0), (2013, 14.0), (2014, 14.0), (2015, 14.0)
delta tanpa air bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tb = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.55), (2000, 0.55), (2001, 0.55), (2002,
0.00), (2003, 0.00), (2004, 5.20), (2005, 5.20), (2006, 5.20), (2007, 5.20), (2008, 5.20), (2009, 5.20),
(2010, 5.20), (2011, 5.20), (2012, 5.20), (2013, 5.20), (2014, 5.20), (2015, 5.20)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
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(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.55), (2005, 1.55), (2006, 1.55), (2007, 1.55), (2008, 1.55), (2009, 1.55), (2010, 1.55), (2011, 1.55), (2012, 1.55), (2013, 1.55), (2014, 1.55), (2015, 1.55)

SKENARIO 2.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 34.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f delta balita kur gizi = delta balita kur gizi*BALITA KR GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 62.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 59.83
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 734868
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 592.9
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapta1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapta = KONSM_PE_KAP*delta_konsum_per_kapta/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 5.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 18.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 60.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta balita kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3))/3))^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
indeks_harapan hidup = (HARPN_HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100

```
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks harapan hidup UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total delta kk = EKK*total delta konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.14), (2000, 8.86), (2001, 9.72), (2002,
0.00), (2003, 0.00), (2004, 13.9), (2005, 13.9), (2006, 13.9), (2007, 13.9), (2008, 13.9), (2009, 13.9),
(2010, 13.9), (2011, 13.9), (2012, 13.9), (2013, 13.9), (2014, 13.9), (2015, 13.9)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 11.2), (2005, 11.2), (2006, 11.2), (2007, 11.2), (2008, 11.2), (2009, 11.2),
(2010, 11.2), (2011, 11.2), (2012, 11.2), (2013, 11.2), (2014, 11.2), (2015, 11.2)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.16), (2000, 0.16), (2001, 0.16), (2002,
3.22), (2003, 0.00), (2004, 1.09), (2005, 1.09), (2006, 1.09), (2007, 1.09), (2008, 1.09), (2009, 1.09),
(2010, 1.09), (2011, 1.09), (2012, 1.09), (2013, 1.09), (2014, 1.09), (2015, 1.09)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.57), (1996, 0.3), (1997, 0.3), (1998, 0.3), (1999, 0.7), (2000, 0.69), (2001, 0.69), (2002, 2.11),
(2003, 0.63), (2004, 2.58), (2005, 2.58), (2006, 2.58), (2007, 2.58), (2008, 2.58), (2009, 2.58), (2010,
2.58), (2011, 2.58), (2012,
2.58), (2013, 2.58), (2014, 2.58), (2015, 2.58)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.52), (1999, 0.00), (2000, 0.34), (2001, 0.41), (2002,
0.00), (2003, 9.23), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.40), (2000, 0.00), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.55), (1997, 0.55), (1998, 0.55), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.46), (2000, 0.46), (2001, 0.46), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.56), (1997, 2.50), (1998, 2.44), (1999, 2.38), (2000, 2.33), (2001, 2.27), (2002,
0.00), (2003, 5.50), (2004, 5.99), (2005, 5.99), (2006, 5.99), (2007, 5.99), (2008, 5.99), (2009, 5.99),
(2010, 5.99), (2011, 5.99), (2012, 5.99), (2013, 5.99), (2014, 5.99), (2015, 5.99)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.15), (2000, 4.33), (2001, 4.52), (2002,
0.00), (2003, 0.00), (2004, 19.3), (2005, 19.3), (2006, 19.3), (2007, 19.3), (2008, 19.3), (2009, 19.3),
(2010, 19.3), (2011, 19.3), (2012, 19.3), (2013, 19.3), (2014, 19.3), (2015, 19.3)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.55), (2000, 0.55), (2001, 0.55), (2002,
0.00), (2003, 0.00), (2004, 11.0), (2005, 11.0), (2006, 11.0), (2007, 11.0), (2008, 11.0), (2009, 11.0),
(2010, 11.0), (2011, 11.0), (2012, 11.0), (2013, 11.0), (2014, 11.0), (2015, 11.0)
```

delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.74), (2005, 1.74), (2006, 1.74), (2007, 1.74), (2008, 1.74), (2009, 1.74), (2010, 1.74), (2011, 1.74), (2012, 1.74), (2013, 1.74), (2014, 1.74), (2015, 1.74)

SKENARIO 3.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta balita kur gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 34.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta balita kur gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta harapan hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 62.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN HIDUP*delta harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 59.83
INFLOWS:
f hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f delta kk) * dt
INIT KESMPT_KERJA = 734868
INFLOWS:
f_delta kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum per kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 592.9
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 5.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA SEKLAH)/100
OUTFLOWS:
f delta lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_meninggal_seb_40 th) * dt
INIT MGL_SB_40_THN = 18.3
INFLOWS:
f delta meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40 th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 60.3
INFLOWS:
f_delta tanpa air bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK DPT AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF

```
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indcks harapan hidup = (HARPN  HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA  KR GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1 konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.14), (2000, 8.86), (2001, 9.72), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0),
(2010, 53.0), (2011, 53.0), (2012, 53.0), (2013, 53.0), (2014, 53.0), (2015, 53.0)
delta_fas_kesi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.02), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.16), (2000, 0.16), (2001, 0.16), (2002,
3.22), (2003, 0.00), (2004, 1.69), (2005, 1.69), (2006, 1.69), (2007, 1.69), (2008, 1.69), (2009, 1.69),
(2010, 1.69), (2011, 1.69), (2012, 1.69), (2013, 1.69), (2014, 1.69), (2015, 1.69)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 1.57), (1996, 0.3), (1997, 0.3), (1998, 0.3), (1999, 0.7), (2000, 0.69), (2001, 0.69), (2002, 2.11),
(2003, 0.63), (2004, 3.35), (2005, 3.35), (2006, 3.35), (2007, 3.35), (2008, 3.35), (2009, 3.35), (2010,
3.35), (2011, 3.35), (2012, 3.35), (2013, 3.35), (2014, 3.35), (2015, 3.35)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.52), (1999, 0.00), (2000, 0.34), (2001, 0.41), (2002,
0.00), (2003, 9.23), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00),
(2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.40), (2000, 0.00), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.55), (1997, 0.55), (1998, 0.55), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum per kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.46), (2000, 0.46), (2001, 0.46), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.56), (1997, 2.50), (1998, 2.44), (1999, 2.38), (2000, 2.33), (2001, 2.27), (2002,
0.00), (2003, 5.50), (2004, 8.16), (2005, 8.16), (2006, 8.16), (2007, 8.16), (2008, 8.16), (2009, 8.16),
(2010, 8.16), (2011, 8.16), (2012, 8.16), (2013, 8.16), (2014, 8.16), (2015, 8.16)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.15), (2000, 4.33), (2001, 4.52), (2002,
0.00), (2003, 0.00), (2004, 57.0), (2005, 57.0), (2006, 57.0), (2007, 57.0), (2008, 57.0), (2009, 57.0),
(2010, 57.0), (2011, 57.0), (2012, 57.0), (2013, 57.0), (2014, 57.0), (2015, 57.0)
delta_tanpa_air_bersih1 = GRAPH(time)
```

REALITAS.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 34.4
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 62.6
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 59.83
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 734868
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 592.9
INFLOWS:
f delta konsum_per_kapita1 =
(KONSM_PE_KAP*delta konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta konsum per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 5.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_ meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 18.3
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 60.3
INFLOWS:
f_delta tanpa air bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa air bersih*TDK_DPT_AIR_BER/100
TDK DPT FAS KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta fas kes) * dt

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.55), (2000, 0.55), (2001, 0.55), (2002, 0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0), (2010, 53.0), (2011, 53.0), (2012, 53.0), (2013, 53.0), (2014, 53.0), (2015, 53.0)
delta_meningga_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.93), (2005, 1.93), (2006, 1.93), (2007, 1.93), (2008, 1.93), (2009, 1.93), (2010, 1.93), (2011, 1.93), (2012, 1.93), (2013, 1.93), (2014, 1.93), (2015, 1.93)

```
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGI_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
Indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per_ kapita UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
mn_harapan_hidup_UNDP)*100
Indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan_ hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per_ kapita UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 8.86), (2001, 9.72), (2002,
0.00), (2003, 0.00), (2004, 10.8), (2005, 9.72), (2006, 8.86), (2007, 8.14), (2008, 7.53), (2009, 7.00),
(2010, 6.54), (2011, 6.14), (2012, 5.79), (2013, 5.47), (2014, 5.19), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 2.54), (2005, 2.48), (2006, 2.42), (2007, 2.36), (2008, 2.31), (2009, 2.25),
(2010, 2.20), (2011, 2.16), (2012, 2.11), (2013, 2.07), (2014, 2.03), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.73), (2000, 2.66), (2001, 2.59), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.02), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.85), (1997, 0.84), (1998, 0.84), (1999, 0.16), (2000, 0.16), (2001, 0.16), (2002,
3.22), (2003, 0.00), (2004, 0.15), (2005, 0.15), (2006, 0.15), (2007, 0.149), (2008, 0.149), (2009, 0.149),
(2010, 0.149), (2011, 0.149), (2012, 0.148), (2013, 0.148), (2014, 0.148), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 1.57), (1996, 0.3), (1997, 0.3), (1998, 0.3), (1999, 0.7), (2000, 0.69), (2001, 0.69), (2002, 2.11),
(2003, 0.63), (2004, 0.668), (2005, 0.664), (2006, 0.66), (2007, 0.655), (2008, 0.651), (2009, 0.647), (2010,
0.643), (2011, 0.639), (2012, 0.634), (2013, 0.63), (2014, 0.627), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 1.52), (1999, 0.00), (2000, 0.34), (2001, 0.41), (2002,
0.00), (2003, 9.23), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.40), (2000, 0.00), (2001, 0.00), (2002,
8.40), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.55), (1997, 0.55), (1998, 0.55), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.46), (2000, 0.46), (2001, 0.46), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.56), (1997, 2.50), (1998, 2.44), (1999, 2.38), (2000, 2.33), (2001, 2.27), (2002,
0.00), (2003, 5.50), (2004, 2.05), (2005, 2.01), (2006, 1.97), (2007, 1.93), (2008, 1.90), (2009, 1.86),
```

(2010, 1.83), (2011, 1.80), (2012, 1.76), (2013, 1.73), (2014, 1.70), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 4.15), (2000, 4.33), (2001, 4.52), (2002, 0.00), (2003, 0.00), (2004, 4.73), (2005, 4.52), (2006, 4.33), (2007, 4.15), (2008, 3.98), (2009, 3.83), (2010, 3.69), (2011, 3.56), (2012, 3.43), (2013, 3.32), (2014, 3.21), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.55), (2000, 0.55), (2001, 0.55), (2002, 0.00), (2003, 0.00), (2004, 0.556), (2005, 0.552), (2006, 0.549), (2007, 0.546), (2008, 0.543), (2009, 0.54), (2010, 0.538), (2011, 0.535), (2012, 0.532), (2013, 0.529), (2014, 0.526), (2015, 0.00)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.457), (2005, 0.455), (2006, 0.453), (2007, 0.451), (2008, 0.448), (2009, 0.446), (2010, 0.444), (2011, 0.443), (2012, 0.441), (2013, 0.439), (2014, 0.437), (2015, 0.00)

KABUPATEN SIDOARJO:

SKENARIO 1.

```
BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.99
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 611174
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM__PE_KAP = 591.4
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.3
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 12.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 26.6
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per_kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
```

min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita UNDP = 732720/1000
nilai_min1_konsum_per_ kapita UNDP = 300000/1000
nilai_min2_konsum per_ _kapita_UNDP = 360000/1000
total delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.8), (2000, 23.1), (2001, 30.1), (2002, 0.00), (2003, 0.00), (2004, 3.26), (2005, 3.26), (2006, 3.26), (2007, 3.26), (2008, 3.26), (2009, 3.26), (2010, 3.26), (2011, 3.26), (2012, 3.26), (2013, 3.26), (2014, 3.26), (2015, 3.26)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.71), (2000, 8.36), (2001, 9.12), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.8), (1997, 0.8), (1998, 0.79), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.51), (2003, 0.39), (2004, 0.065), (2005, 0.065), (2006, 0.065), (2007, 0.065), (2008, 0.065), (2009, 0.065), (2010, 0.065), (2011, 0.065), (2012, 0.065), (2013, 0.065), (2014, 0.065), (2015, 0.065)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.71), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.99), (1996, 0.72), (1997, 0.71), (1998, 0.71), (1999, 1.27), (2000, 1.26), (2001, 1.24), (2002, 1.83), (2003, 0.00), (2004, 0.9), (2005, 0.9), (2006, 0.9), (2007, 0.9), (2008, 0.9), (2009, 0.9), (2010, 0.9), (2011, 0.9), (2012, 0.9), (2013, 0.9), (2014, 0.9), (2015, 0.9)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 4.22), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.81), (1999, 6.43), (2000, 2.26), (2001, 0.17), (2002, 3.88), (2003,
0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum _per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.2), (1997, 0.2), (1998, 0.2), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.39), (2000, 1.38), (2001, 1.36), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 1.06), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.01), (1997, 1.97), (1998, 1.93), (1999, 2.27), (2000, 2.22), (2001, 2.17), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.26), (2000, 3.37), (2001, 3.49), (2002, 0.00), (2003, 0.00), (2004, 7.65), (2005, 7.65), (2006, 7.65), (2007, 7.65), (2008, 7.65), (2009, 7.65), (2010, 7.65), (2011, 7.65), (2012, 7.65), (2013, 7.65), (2014, 7.65), (2015, 7.65)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.82), (2000, 0.83), (2001, 0.83), (2002, 0.00), (2003, 0.00), (2004, 1.57), (2005, 1.57), (2006, 1.57), (2007, 1.57), (2008, 1.57), (2009, 1.57), (2010, 1.57), (2011, 1.57), (2012, 1.57), (2013, 1.57), (2014, 1.57), (2015, 1.57)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),

(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.22), (2005, 1.22), (2006, 1.22), (2007, 1.22), (2008, 1.22), (2009, 1.22), (2010, 1.22), (2011, 1.22), (2012, 1.22), (2013, 1.22), (2014, 1.22), (2015, 1.22)

SKENARIO 2.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.99
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 611174
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 591.4
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.3
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 12.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 26.6
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
Indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100

```
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama sekolah maks UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA   KR GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
mln_harapan_hidup_UNDP = 25
nilai maks konsum_per__kapita_ UNDP = 732720/1000
nilai_mi1_konsum_per__kapita_ UNDP = 300000/1000
nilai_mi2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.8), (2000, 23.1), (2001, 30.1), (2002,
0.00), (2003, 0.00), (2004, 9.17), (2005, 9.17), (2006, 9.17), (2007, 9.17), (2008, 9.17), (2009, 9.17),
(2010, 9.17), (2011, 9.17), (2012, 9.17), (2013, 9.17), (2014, 9.17), (2015, 9.17)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.71), (2000, 8.36), (2001, 9.12), (2002,
0.00), (2003, 0.00), (2004, 5.49), (2005, 5.49), (2006, 5.49), (2007, 5.49), (2008, 5.49), (2009, 5.49),
(2010, 5.49), (2011, 5.49), (2012, 5.49), (2013, 5.49), (2014, 5.49), (2015, 5.49)
della fas kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.8), (1997, 0.8), (1998, 0.79), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.51),
(2003, 0.39), (2004, 0.694), (2005, 0.694), (2006, 0.694), (2007, 0.694), (2008, 0.694), (2009, 0.694),
(2010, 0.694), (2011, 0.694), (2012, 0.694), (2013, 0.694), (2014, 0.694), (2015, 0.694)
delta hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.71), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.99), (1996, 0.72), (1997, 0.71), (1998, 0.71), (1999, 1.27), (2000, 1.26), (2001, 1.24), (2002,
1.83), (2003, 0.00), (2004, 1.57), (2005, 1.57), (2006, 1.57), (2007, 1.57), (2008, 1.57), (2009, 1.57),
(2010, 1.57), (2011, 1.57), (2012, 1.57), (2013, 1.57), (2014, 1.57), (2015, 1.57)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 4.22), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.81), (1999, 6.43), (2000, 2.26), (2001, 0.17), (2002,
3.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.2), (1997, 0.2), (1998, 0.2), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00),
(2003, 0.00),
(2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011,
0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.39), (2000, 1.38), (2001, 1.36), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.06), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.01), (1997, 1.97), (1998, 1.93), (1999, 2.27), (2000, 2.22), (2001, 2.17), (2002,
0.00), (2003, 0.00), (2004, 2.34), (2005, 2.34), (2006, 2.34), (2007, 2.34), (2008, 2.34), (2009, 2.34),
(2010, 2.34), (2011, 2.34), (2012, 2.34), (2013, 2.34), (2014, 2.34), (2015, 2.34)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.26), (2000, 3.37), (2001, 3.49), (2002,
0.00), (2003, 0.00), (2004, 13.3), (2005, 13.3), (2006, 13.3), (2007, 13.3), (2008, 13.3), (2009, 13.3),
(2010, 13.3), (2011, 13.3), (2012, 13.3), (2013, 13.3), (2014, 13.3), (2015, 13.3)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa__air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.82), (2000, 0.83), (2001, 0.83), (2002,
0.00), (2003, 0.00), (2004, 7.58), (2005, 7.58), (2006, 7.58), (2007, 7.58), (2008, 7.58), (2009, 7.58),
(2010, 7.58), (2011, 7.58), (2012, 7.58), (2013, 7.58), (2014, 7.58), (2015, 7.58)
```

delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.42), (2005, 1.42), (2006, 1.42), (2007, 1.42), (2008, 1.42), (2009, 1.42), (2010, 1.42), (2011, 1.42), (2012, 1.42), (2013, 1.42), (2014, 1.42), (2015, 1.42)

SKENARIO 3.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 66.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.99
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 611174
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 591.4
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 8.3
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 12.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 26.6
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 12.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF

```
delta_balita_kur_gizi1 = 0
HPI = ((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min harapan hidup UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERUA
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK HURUF = (4.5*HDI-4.5*1/3*indeks  harapan  hidup-4.5*1/3*indeks pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total delta konsum per kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.8), (2000, 23.1), (2001, 30.1), (2002,
0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0),
(2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.71), (2000, 8.36), (2001, 9.12), (2002,
0.00), (2003, 0.00), (2004, 50.0), (2005, 50.0), (2006, 50.0), (2007, 50.0), (2008, 50.0), (2009, 50.0),
(2010, 50.0), (2011, 50.0), (2012, 50.0), (2013, 50.0), (2014, 50.0), (2015, 50.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.8), (1997, 0.8), (1998, 0.79), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.51),
(2003, 0.39), (2004, 1.29), (2005, 1.29), (2006, 1.29), (2007, 1.29), (2008, 1.29), (2009, 1.29), (2010,
1.29), (2011, 1.29), (2012, 1.29), (2013, 1.29), (2014, 1.29), (2015, 1.29)
delta hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.71), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.99), (1996, 0.72), (1997, 0.71), (1998, 0.71), (1999, 1.27), (2000, 1.26), (2001, 1.24), (2002,
1.83), (2003, 0.00), (2004, 2.22), (2005, 2.22), (2006, 2.22), (2007, 2.22), (2008, 2.22), (2009, 2.22),
(2010, 2.22), (2011, 2.22), (2012, 2.22), (2013, 2.22), (2014, 2.22), (2015, 2.22)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 4.22), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.81), (1999, 6.43), (2000, 2.26), (2001, 0.17), (2002,
3.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.2), (1997, 0.2), (1998, 0.2), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00),
(2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010,
0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.39), (2000, 1.38), (2001, 1.36), (2002,
0.00), (2003,
0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00),
(2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.06), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.01), (1997, 1.97), (1998, 1.93), (1999, 2.27), (2000, 2.22), (2001, 2.17), (2002,
0.00), (2003, 0.00), (2004, 4.44), (2005, 4.44), (2006, 4.44), (2007, 4.44), (2008, 4.44), (2009, 4.44),
(2010, 4.44), (2011, 4.44), (2012, 4.44), (2013, 4.44), (2014, 4.44), (2015, 4.44)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.26), (2000, 3.37), (2001, 3.49), (2002,
0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0),
(2010, 54.0), (2011, 54.0), (2012, 54.0), (2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_tanpa_air_bersih1 = GRAPH(time)
```

(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.82), (2000, 0.83), (2001, 0.83), (2002, 0.00), (2003, 0.00), (2004, 51.0), (2005, 51.0), (2006, 51.0), (2007, 51.0), (2008, 51.0), (2009, 51.0), (2010, 51.0), (2011, 51.0), (2012, 51.0), (2013, 51.0), (2014, 51.0), (2015, 51.0)

delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)

rasio TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)

total_delta_konsum per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.61), (2005, 1.61), (2006, 1.61), (2007, 1.61), (2008, 1.61), (2009, 1.61), (2010, 1.61), (2011, 1.61), (2012, 1.61), (2013, 1.61), (2014, 1.61), (2015, 1.61)

REALITAS.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 33
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta balita kur gizi*BALITA_KR_GIZI/100

HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 66.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f delta harapan hidup = HARPN_HIDUP*delta_harapan_hidup/100

HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 66.99
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f hdi = (HDI*delta hdi)/100

KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 611174
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total delta kk/100)
OUTFLOWS:
f delta kk = KESMPT_KERJA*delta_kk/100

KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 591.4
INFLOWS:
f delta konsum per kapita1 = (KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100

LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 8.3
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100

MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f delta meninggal seb_40_th1 - f delta _meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 12.2
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f dcita meninggal seb 40 th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100

TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 26.6
INFLOWS:
f delta tanpa air bersih1 = TDK DPT AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100

TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt

```
INIT TDK_DPT_FAS_KES = 12.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT KERJA*rasio TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan_hidup = (HARPN_ HIDUP-min_harapan_hidup_UNDP)/(maks harapan hidup UNDP-
min_harapan_hidup_UNDP)*100
indeks_lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_Ak_thp_KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA_KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3+indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks konsum per__kapita_UNDP = 732720/1000
nilai min1 konsum per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 3600000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 18.8), (2000, 23.1), (2001, 30.1), (2002,
0.00), (2003, 0.00), (2004, 43.1), (2005, 30.1), (2006, 23.1), (2007, 18.8), (2008, 15.8), (2009, 13.7),
(2010, 12.0), (2011, 10.7), (2012, 9.69), (2013, 8.83), (2014, 8.12), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 7.71), (2000, 8.36), (2001, 9.12), (2002,
0.00), (2003, 0.00), (2004, 10.0), (2005, 9.09), (2006, 8.33), (2007, 7.69), (2008, 7.14), (2009, 6.67),
(2010, 6.25), (2011, 5.88), (2012, 5.56), (2013, 5.26), (2014, 5.00), (2015, 0.00)
delta fas kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.8), (1997, 0.8), (1998, 0.79), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.51),
(2003, 0.39), (2004, 0.144), (2005, 0.144), (2006, 0.143), (2007, 0.143), (2008, 0.143), (2009, 0.143),
(2010, 0.143), (2011, 0.142), (2012, 0.142), (2013, 0.142), (2014, 0.142), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 0.99), (1996, 0.72), (1997, 0.71), (1998, 0.71), (1999, 1.27), (2000, 1.26), (2001, 1.24), (2002,
1.83), (2003, 0.00), (2004, 1.21), (2005, 1.20), (2006, 1.18), (2007, 1.17), (2008, 1.16), (2009, 1.14),
(2010, 1.13), (2011, 1.12), (2012, 1.11), (2013, 1.09), (2014, 1.08), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 4.22), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.81), (1999, 6.43), (2000, 2.26), (2001, 0.17), (2002,
3.88), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.2), (1997, 0.2), (1998, 0.2), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00),
(2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010,
0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.39), (2000, 1.38), (2001, 1.36), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 1.06), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.01), (1997, 1.97), (1998, 1.93), (1999, 2.27), (2000, 2.22), (2001, 2.17), (2002,
0.00), (2003, 0.00), (2004, 2.15), (2005, 2.11), (2006, 2.06), (2007, 2.02), (2008, 1.98), (2009, 1.94),
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(2010, 1.90), (2011, 1.87), (2012, 1.83), (2013, 1.80), (2014, 1.77), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.26), (2000, 3.37), (2001, 3.49), (2002, 0.00), (2003, 0.00), (2004, 3.63), (2005, 3.50), (2006, 3.38), (2007, 3.27), (2008, 3.17), (2009, 3.07), (2010, 2.98), (2011, 2.89), (2012, 2.81), (2013, 2.73), (2014, 2.66), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta meninggal scb 40 th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.82), (2000, 0.83), (2001, 0.83), (2002, 0.00), (2003, 0.00), (2004, 0.84), (2005, 0.833), (2006, 0.826), (2007, 0.82), (2008, 0.813), (2009, 0.806), (2010, 0.8), (2011, 0.794), (2012, 0.787), (2013, 0.781), (2014, 0.775), (2015, 0.00)
delta__meninggal_scb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.04), (1996, 1.04), (1997, 1.04), (1998, 1.04), (1999, 1.04), (2000, 1.05), (2001, 1.04), (2002, 1.04), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.34), (2005, 1.32), (2006, 1.30), (2007, 1.29), (2008, 1.27), (2009, 1.25), (2010, 1.24), (2011, 1.22), (2012, 1.21), (2013, 1.19), (2014, 1.18), (2015, 0.00)

KABUPATEN NGANJUK:

SKENARIO 1.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 27.9
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 65.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.79
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 466205
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 588.6
INFLOWS:
f_delta_konsum_per_kapita1 = (KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 5.7
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 13.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
Indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*Indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-4.5*1/9*indeks__lama_sekolah)

```
min_harapan_hidup UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum_per_kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.20), (2000, 10.1), (2001, 11.3), (2002, 0.00), (2003, 0.00), (2004, 6.19), (2005, 6.19), (2006, 6.19), (2007, 6.19), (2008, 6.19), (2009, 6.19), (2010, 6.19), (2011, 6.19), (2012, 6.19), (2013, 6.19), (2014, 6.19), (2015, 6.19)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 11.5), (2005, 11.5), (2006, 11.5), (2007, 11.5), (2008, 11.5), (2009, 11.5), (2010, 11.5), (2011, 11.5), (2012, 11.5), (2013, 11.5), (2014, 11.5), (2015, 11.5)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 41.7), (2000, 29.4), (2001, 22.7), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.82), (1997, 0.81), (1998, 0.8), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.52), (2003, 0.37), (2004, 0.2), (2005, 0.2), (2006, 0.2), (2007, 0.2), (2008, 0.2), (2009, 0.2), (2010, 0.2), (2011, 0.2), (2012, 0.2), (2013, 0.2), (2014, 0.2), (2015, 0.2)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.56), (1996, 0.69), (1997, 0.68), (1998, 0.68), (1999, 0.69), (2000, 0.69), (2001, 0.68), (2002, 1.13), (2003, 0.6), (2004, 1.62), (2005, 1.62), (2006, 1.62), (2007, 1.62), (2008, 1.62), (2009, 1.62), (2010, 1.62), (2011, 1.62), (2012, 1.62), (2013, 1.62), (2014, 1.62), (2015, 1.62)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 8.16), (1999, 5.65), (2000, 0.00), (2001, 1.20), (2002, 0.00), (2003, 2.50), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 8.86), (2001, 0.00), (2002, 10.8), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.75), (2001, 0.75), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.34), (1997, 2.29), (1998, 2.23), (1999, 2.19), (2000, 2.14), (2001, 2.09), (2002, 0.00), (2003, 2.00), (2004, 3.81), (2005, 3.81), (2006, 3.81), (2007, 3.81), (2008, 3.81), (2009, 3.81), (2010, 3.81), (2011, 3.81), (2012, 3.81), (2013, 3.81), (2014, 3.81), (2015, 3.81)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.10), (2000, 8.81), (2001, 9.67), (2002, 0.00), (2003, 0.00), (2004, 10.1), (2005, 10.1), (2006, 10.1), (2007, 10.1), (2008, 10.1), (2009, 10.1), (2010, 10.1), (2011, 10.1), (2012, 10.1), (2013, 10.1), (2014, 10.1), (2015, 10.1)
delta tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.97), (2000, 0.98), (2001, 0.99), (2002, 0.00), (2003, 0.00), (2004, 2.62), (2005, 2.62), (2006, 2.62), (2007, 2.62), (2008, 2.62), (2009, 2.62), (2010, 2.62), (2011, 2.62), (2012, 2.62), (2013, 2.62), (2014, 2.62), (2015, 2.62)
delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
```

rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002, 1.07), (2003, 1.07), (2004, 1.07), (2005, 1.07), (2006, 1.07), (2007, 1.07), (2008, 1.07), (2009, 1.07), (2010, 1.07), (2011, 1.07), (2012, 1.07), (2013, 1.07), (2014, 1.07), (2015, 1.07)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.57), (2005, 1.57), (2006, 1.57), (2007, 1.57), (2008, 1.57), (2009, 1.57), (2010, 1.57), (2011, 1.57), (2012, 1.57), (2013, 1.57), (2014, 1.57), (2015, 1.57)

SKENARIO 2.

BALITA KR GIZI(t) = BALITA KR GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA KR GIZI = 27.9
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA KR GIZI*delta balita kur gizi1/100
OUTFLOWS:
f delta balita kur gizi = delta_balita kur_gizi*BALITA KR GIZI/100
HARPN HIDUP(t) = HARPN HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN HIDUP = 65.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN HIDUP)/100
OUTFLOWS:
f delta harapan_hidup = HARPN HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 61.79
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 466205
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 588.6
INFLOWS:
f delta konsum per kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA SEKLAH = 5.7
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 13.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f delta meninggal seb 40 th = MGL SB 40 THN*delta_meninggal seb 40 th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.8
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK DPT FAS KES*delta fas kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta balita kur gizi1 = 0
HP1 = ((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3))+((layak hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM_PE_KAP-
nilai_min2_konsum_per_kapita_UNDP)/(nilai_maks_konsum_per_kapita_UNDP-
nilai_min1_konsum_per_kapita_UNDP))*100
Indeks harapan hidup = (HARPN_HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
Indeks_lama_sekolah = ((LAMA_SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100

```
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotto_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak hidup = 1/3*(TDK DPT AIR BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.20), (2000, 10.1), (2001, 11.3), (2002,
0.00), (2003, 0.00), (2004, 11.9), (2005, 11.9), (2006, 11.9), (2007, 11.9), (2008, 11.9), (2009, 11.9),
(2010, 11.9), (2011, 11.9), (2012, 11.9), (2013, 11.9), (2014, 11.9), (2015, 11.9)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 16.9), (2005, 16.9), (2006, 16.9), (2007, 16.9), (2008, 16.9), (2009, 16.9),
(2010, 16.9), (2011, 16.9), (2012, 16.9), (2013, 16.9), (2014, 16.9), (2015, 16.9)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 41.7), (2000, 29.4), (2001, 22.7), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.82), (1997, 0.81), (1998, 0.8), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.52),
(2003, 0.37), (2004, 0.831), (2005, 0.831), (2006, 0.831), (2007, 0.831), (2008, 0.831), (2009, 0.831),
(2010, 0.831), (2011, 0.831), (2012, 0.831), (2013, 0.831), (2014, 0.831), (2015, 0.831)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 0.56), (1996, 0.69), (1997, 0.68), (1998, 0.68), (1999, 0.69), (2000, 0.69), (2001, 0.68), (2002,
1.13), (2003, 0.6), (2004, 2.36), (2005, 2.36), (2006, 2.36), (2007, 2.36), (2008, 2.36), (2009, 2.36), (2010,
2.36), (2011, 2.36), (2012, 2.36), (2013, 2.36), (2014, 2.36), (2015, 2.36)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 8.16), (1999, 5.65), (2000, 0.00), (2001, 1.20), (2002,
0.00), (2003, 2.50), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 8.86), (2001, 0.00), (2002,
10.8), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.75), (2001, 0.75), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.34), (1997, 2.29), (1998, 2.23), (1999, 2.19), (2000, 2.14), (2001, 2.09), (2002,
0.00), (2003, 2.00), (2004, 5.54), (2005, 5.54), (2006, 5.54), (2007, 5.54), (2008, 5.54), (2009, 5.54),
(2010, 5.54), (2011, 5.54), (2012, 5.54), (2013, 5.54), (2014, 5.54), (2015, 5.54)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.10), (2000, 8.81), (2001, 9.67), (2002,
0.00), (2003, 0.00), (2004, 15.6), (2005, 15.6), (2006, 15.6), (2007, 15.6), (2008, 15.6), (2009, 15.6),
(2010, 15.6), (2011, 15.6), (2012, 15.6), (2013, 15.6), (2014, 15.6), (2015, 15.6)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.97), (2000, 0.98), (2001, 0.99), (2002,
0.00), (2003, 0.00), (2004, 8.57), (2005, 8.57), (2006, 8.57), (2007, 8.57), (2008, 8.57), (2009, 8.57),
(2010, 8.57), (2011, 8.57), (2012, 8.57), (2013, 8.57), (2014, 8.57), (2015, 8.57)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
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0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002, 1.07), (2003, 1.07), (2004, 1.07), (2005, 1.07), (2006, 1.07), (2007, 1.07), (2008, 1.07), (2009, 1.07), (2010, 1.07), (2011, 1.07), (2012, 1.07), (2013, 1.07), (2014, 1.07), (2015, 1.07)
total delta konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.76), (2005, 1.76), (2006, 1.76), (2007, 1.76), (2008, 1.76), (2009, 1.76), (2010, 1.76), (2011, 1.76), (2012, 1.76), (2013, 1.76), (2014, 1.76), (2015, 1.76)

SKENARIO 3.
BALITA_ KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA KR GIZI = 27.9
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN HIDUP(t - dt) + (f delta harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 65.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f delta harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f hdi1 - f hdi) * dt
INIT HDI = 61.79
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f hdi = (HDI*delta hdi)/100
KESMPT_KERJA(t) = KESMPT KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 466205
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT KERJA*delta kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f delta konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 588.6
INFLOWS:
f delta konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum per kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA SEKLAH = 5.7
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 13.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_ meninggal seb_40_th1/100
OUTFLOWS:
f_delta__meninggal seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK DPT AIR BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.8
INFLOWS:
f delta tanpa air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta fas kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita kur gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak hidup)^3))/3)^(1/3))

```
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BAUTA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.20), (2000, 10.1), (2001, 11.3), (2002,
0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0),
(2010, 53.0), (2011, 53.0), (2012, 53.0), (2013, 53.0), (2014, 53.0), (2015, 53.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 41.7), (2000, 29.4), (2001, 22.7), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.82), (1997, 0.81), (1998, 0.8), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.52),
(2003, 0.37), (2004, 1.42), (2005, 1.42), (2006, 1.42), (2007, 1.42), (2008, 1.42), (2009, 1.42), (2010,
1.42), (2011, 1.42), (2012, 1.42), (2013, 1.42), (2014, 1.42), (2015, 1.42)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.56), (1996, 0.69), (1997, 0.68), (1998, 0.68), (1999, 0.69), (2000, 0.69), (2001, 0.68), (2002,
1.13), (2003, 0.6), (2004, 3.13), (2005, 3.13), (2006, 3.13), (2007, 3.13), (2008, 3.13), (2009, 3.13), (2010,
3.13), (2011, 3.13), (2012, 3.13), (2013, 3.13), (2014, 3.13), (2015, 3.13)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 8.16), (1999, 5.65), (2000, 0.00), (2001, 1.20), (2002,
0.00), (2003, 2.50), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 8.86), (2001, 0.00), (2002,
10.8), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.75), (2001, 0.75), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.34), (1997, 2.29), (1998, 2.23), (1999, 2.19), (2000, 2.14), (2001, 2.09), (2002,
0.00), (2003, 2.00), (2004, 7.71), (2005, 7.71), (2006, 7.71), (2007, 7.71), (2008, 7.71), (2009, 7.71),
(2010, 7.71), (2011, 7.71), (2012, 7.71), (2013, 7.71), (2014, 7.71), (2015, 7.71)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.10), (2000, 8.81), (2001, 9.67), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
```

delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.97), (2000, 0.98), (2001, 0.99), (2002, 0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0), (2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)

delta meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)

rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002, 1.07), (2003, 1.07), (2004, 1.07), (2005, 1.07), (2006, 1.07), (2007, 1.07), (2008, 1.07), (2009, 1.07), (2010, 1.07), (2011, 1.07), (2012, 1.07), (2013, 1.07), (2014, 1.07), (2015, 1.07)

total delta konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.95), (2005, 1.95), (2006, 1.95), (2007, 1.95), (2008, 1.95), (2009, 1.95), (2010, 1.95), (2011, 1.95), (2012, 1.95), (2013, 1.95), (2014, 1.95), (2015, 1.95)

REALITAS.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur gizi) * dt
INIT BALITA_KR_GIZI = 27.9
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita kur gizi1/100
OUTFLOWS:
f_delta balita kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100

HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 65.3
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_ HIDUP)/100
OUTFLOWS:
f_delta_ harapan hidup = HARPN_HIDUP*delta_harapan_hidup/100

HDI(t) = HDI(t - dt) + (f hdi2 - f_hdi) * dt
INIT HDI = 61.79
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta hdi)/100

KESMPT_KERJA(t) = KESMPT KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 466205
INFLOWS:
f delta kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT KERJA*delta_kk/100

KONSM_PE_KAP(t) = KONSM_PE KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per kapita) * dt
INIT KONSM_PE_KAP = 588.6
INFLOWS:
f_delta_konsum per_kapita1 = (KONSM_PE_KAP*delta_ konsum per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100

LAMA SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_ SEKLAH = 5.7
INFLOWS:
f_delta_lama_sekolah1 = (delta lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f delta_lama_sekolah = LAMA_SEKLAH*delta_lama sekolah/100

MGL_SB_40 THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal seb_40_th1 - f_delta_meninggal scb 40_th) * dt
INIT MGL_SB_40_THN = 13.8
INFLOWS:
f delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal seb_40_th/100

TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 42.8
INFLOWS:
f_delta_tanpa air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa air bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta tanpa_air_bersih*TDK_DPT_AIR_BER/100

TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 17.1
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta fas_kes1/100

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OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta batita kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks harapan hidup = (HARPN _HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT AIR BER+TDK DPT FAS KES+BALITA  KR GIZI)
maks harapan hidup UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks konsum_per  kapita UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 9.20), (2000, 10.1), (2001, 11.3), (2002,
0.00), (2003, 0.00), (2004, 12.7), (2005, 11.3), (2006, 10.1), (2007, 9.21), (2008, 8.43), (2009, 7.78),
(2010, 7.21), (2011, 6.73), (2012, 6.31), (2013, 5.93), (2014, 5.60), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 9.09), (2005, 8.33), (2006, 7.69), (2007, 7.14), (2008, 6.67), (2009, 6.25),
(2010, 5.88), (2011, 5.56), (2012, 5.26), (2013, 5.00), (2014, 4.76), (2015, 0.00)
delta fas kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 41.7), (2000, 29.4), (2001, 22.7), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.82), (1997, 0.81), (1998, 0.8), (1999, 0.15), (2000, 0.15), (2001, 0.15), (2002, 1.52),
(2003, 0.37), (2004, 0.146), (2005, 0.146), (2006, 0.146), (2007, 0.145), (2008, 0.145), (2009, 0.145),
(2010, 0.145), (2011, 0.145), (2012, 0.144), (2013, 0.144), (2014, 0.144), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.56), (1996, 0.69), (1997, 0.68), (1998, 0.68), (1999, 0.69), (2000, 0.69), (2001, 0.68), (2002,
1.13), (2003, 0.6), (2004, 0.759), (2005, 0.753), (2006, 0.748), (2007, 0.742), (2008, 0.737), (2009, 0.732),
(2010, 0.726), (2011, 0.721), (2012, 0.716), (2013, 0.711), (2014, 0.706), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 8.16), (1999, 5.65), (2000, 0.00), (2001, 1.20), (2002,
0.00), (2003, 2.50), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 8.86), (2001, 0.00), (2002,
10.8), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.76), (2000, 0.75), (2001, 0.75), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 2.34), (1997, 2.29), (1998, 2.23), (1999, 2.19), (2000, 2.14), (2001, 2.09), (2002,
0.00), (2003, 2.00), (2004, 1.96), (2005, 1.92), (2006, 1.89), (2007, 1.85), (2008, 1.82), (2009, 1.79),
(2010, 1.75), (2011, 1.72), (2012, 1.69), (2013, 1.67), (2014, 1.64), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 8.10), (2000, 8.81), (2001, 9.67), (2002,
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0.00), (2003, 0.00), (2004, 10.7), (2005, 9.67), (2006, 8.82), (2007, 8.11), (2008, 7.50), (2009, 6.97),
(2010, 6.52), (2011, 6.12), (2012, 5.77), (2013, 5.45), (2014, 5.17), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meningal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.97), (2000, 0.98), (2001, 0.99), (2002,
0.00), (2003, 0.00), (2004, 0.97), (2005, 0.961), (2006, 0.952), (2007, 0.943), (2008, 0.934), (2009, 0.925),
(2010, 0.917), (2011, 0.908), (2012, 0.9), (2013, 0.892), (2014, 0.884), (2015, 0.00)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.05), (2001, 1.05), (2002,
1.07), (2003, 1.07), (2004, 1.07), (2005, 1.07), (2006, 1.07), (2007, 1.07), (2008, 1.07), (2009, 1.07),
(2010, 1.07), (2011, 1.07), (2012, 1.07), (2013, 1.07), (2014, 1.07), (2015, 1.07)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.741), (2005, 0.735), (2006, 0.73), (2007, 0.725), (2008, 0.719), (2009, 0.714),
(2010, 0.709), (2011, 0.704), (2012, 0.699), (2013, 0.694), (2014, 0.69), (2015, 0.00)
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KABUPATEN TUBAN:

SKENARIO 1.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA_ KR GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 64.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 56.34
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 503872
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 588.6
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 4.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 15.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 38.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 23.9
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM_PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-4.5*1/9*indeks__lama_sekolah)

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min_harapan hidup UNDP = 25
nilai maks konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK+total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.9), (2000, 0.91), (2001, 0.92), (2002, 0.00),
(2003, 0.00), (2004, 10.1), (2005, 10.1), (2006, 10.1), (2007, 10.1), (2008, 10.1), (2009, 10.1), (2010,
10.1), (2011, 10.1), (2012, 10.1), (2013, 10.1), (2014, 10.1), (2015, 10.1)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 6.42), (2000, 6.86), (2001, 7.36), (2002,
0.00), (2003, 0.00), (2004, 5.80), (2005, 5.80), (2006, 5.80), (2007, 5.80), (2008, 5.80), (2009, 5.80),
(2010, 5.80), (2011, 5.80), (2012, 5.80), (2013, 5.80), (2014, 5.80), (2015, 5.80)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.83), (1997, 0.82), (1998, 0.82), (1999, 0.05), (2000, 0.05), (2001, 0.05), (2002,
2.17), (2003, 1.54), (2004, 0.215), (2005, 0.215), (2006, 0.215), (2007, 0.215), (2008, 0.215), (2009,
0.215), (2010, 0.215), (2011, 0.215), (2012, 0.215), (2013, 0.215), (2014, 0.215), (2015, 0.215)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.91), (1996, 1.56), (1997, 1.54), (1998, 1.51), (1999, 0.86), (2000, 0.85), (2001, 0.84), (2002,
1.63), (2003, 1.64), (2004, 1.94), (2005, 1.94), (2006, 1.94), (2007, 1.94), (2008, 1.94), (2009, 1.94),
(2010, 1.94), (2011, 1.94), (2012, 1.94), (2013, 1.94), (2014, 1.94), (2015, 1.94)
delta kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 6.63), (1999, 0.00), (2000, 5.91), (2001, 0.00), (2002,
0.76), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.33), (1997, 0.33), (1998, 0.33), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.37), (2000, 0.37), (2001, 0.37), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta lama sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 4.76), (1997, 4.55), (1998, 4.35), (1999, 2.78), (2000, 2.70), (2001, 2.63), (2002,
0.00), (2003, 6.35), (2004, 4.53), (2005, 4.53), (2006, 4.53), (2007, 4.53), (2008, 4.53), (2009, 4.53),
(2010, 4.53), (2011, 4.53), (2012, 4.53), (2013, 4.53), (2014, 4.53), (2015, 4.53)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 12.1), (2005, 12.1), (2006, 12.1), (2007, 12.1), (2008, 12.1), (2009, 12.1),
(2010, 12.1), (2011, 12.1), (2012, 12.1), (2013, 12.1), (2014, 12.1), (2015, 12.1)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.25), (2000, 2.20), (2001, 2.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meningge|_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.21), (2000, 0.21), (2001, 0.21), (2002,
0.00), (2003, 0.00), (2004, 3.91), (2005, 3.91), (2006, 3.91), (2007, 3.91), (2008, 3.91), (2009, 3.91),
(2010, 3.91), (2011, 3.91), (2012, 3.91), (2013, 3.91), (2014, 3.91), (2015, 3.91)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
```

rasio_TKK = GRAPH(time)
(1995, 1.02), (1996, 1.02), (1997, 1.02), (1998, 1.02), (1999, 1.04), (2000, 1.04), (2001, 1.03), (2002, 1.04), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06), (2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.58), (2005, 1.58), (2006, 1.58), (2007, 1.58), (2008, 1.58), (2009, 1.58), (2010, 1.58), (2011, 1.58), (2012, 1.58), (2013, 1.58), (2014, 1.58), (2015, 1.58)

SKENARIO 2.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 33.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 64.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 56.34
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 503872
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 588.6
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 4.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 15.6
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 38.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 23.9
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100

```
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK DPT AIR BER+TDK DPT FAS KES+BALITA  KR GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min harapan hidup_UNDP = 25
nilai maks konsum per  kapita UNDP = 732720/1000
nilai_min1_konsum_per__kapita UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 3600000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.9), (2000, 0.91), (2001, 0.92), (2002, 0.00),
(2003, 0.00), (2004, 15.6), (2005, 15.6), (2006, 15.6), (2007, 15.6), (2008, 15.6), (2009, 15.6), (2010,
15.6), (2011, 15.6), (2012, 15.6), (2013, 15.6), (2014, 15.6), (2015, 15.6)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 6.42), (2000, 6.86), (2001, 7.36), (2002,
0.00), (2003, 0.00), (2004, 11.6), (2005, 11.6), (2006, 11.6), (2007, 11.6), (2008, 11.6), (2009, 11.6),
(2010, 11.6), (2011, 11.6), (2012, 11.6), (2013, 11.6), (2014, 11.6), (2015, 11.6)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.83), (1997, 0.82), (1998, 0.82), (1999, 0.05), (2000, 0.05), (2001, 0.05), (2002,
2.17), (2003, 1.54), (2004, 0.846), (2005, 0.846), (2006, 0.846), (2007, 0.846), (2008, 0.846), (2009,
0.846), (2010, 0.846), (2011, 0.846), (2012, 0.846), (2013, 0.846), (2014, 0.846), (2015, 0.846)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 0.91), (1996, 1.56), (1997, 1.54), (1998, 1.51), (1999, 0.86), (2000, 0.85), (2001, 0.84), (2002,
1.63), (2003, 1.64), (2004, 2.77), (2005, 2.77), (2006, 2.77), (2007, 2.77), (2008, 2.77), (2009, 2.77),
(2010, 2.77), (2011, 2.77), (2012, 2.77), (2013, 2.77), (2014, 2.77), (2015, 2.77)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.31), (2000, 0.00), (2001, 1.55), (2002,
0.00), (2003, 2.36), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 6.63), (1999, 0.00), (2000, 5.91), (2001, 0.00), (2002,
0.76), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.33), (1997, 0.33), (1998, 0.33), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.37), (2000, 0.37), (2001, 0.37), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 4.76), (1997, 4.55), (1998, 4.35), (1999, 2.78), (2000, 2.70), (2001, 2.63), (2002,
0.00), (2003, 6.35), (2004, 7.30), (2005, 7.30), (2006, 7.30), (2007, 7.30), (2008, 7.30), (2009, 7.30),
(2010, 7.30), (2011, 7.30), (2012, 7.30), (2013, 7.30), (2014, 7.30), (2015, 7.30)
delta_tanpa_air bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 17.4), (2005, 17.4), (2006, 17.4), (2007, 17.4), (2008, 17.4), (2009, 17.4),
(2010, 17.4), (2011, 17.4), (2012, 17.4), (2013, 17.4), (2014, 17.4), (2015, 17.4)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.25), (2000, 2.20), (2001, 2.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.21), (2000, 0.21), (2001, 0.21), (2002,
0.00), (2003, 0.00), (2004, 9.78), (2005, 9.78), (2006, 9.78), (2007, 9.78), (2008, 9.78), (2009, 9.78),
(2010, 9.78), (2011, 9.78), (2012, 9.78), (2013, 9.78), (2014, 9.78), (2015, 9.78)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
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0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio TKK = GRAPH(time)
(1995, 1.02), (1996, 1.02), (1997, 1.02), (1998, 1.02), (1999, 1.04), (2000, 1.04), (2001, 1.03), (2002,
1.04), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.77), (2005, 1.77), (2006, 1.77), (2007, 1.77), (2008, 1.77), (2009, 1.77),
(2010, 1.77), (2011, 1.77), (2012, 1.77), (2013, 1.77), (2014, 1.77), (2015, 1.77)

SKENARIO 3.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 33.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 64.2
INFLOWS:
f delta harapan hidup1 = (delta harapan hidup1*HARPN HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 56.34
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 503872
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total delta kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_PE_KAP = 588.6
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta konsum pcr kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f delta lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 4.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 -
f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 15.6
INFLOWS:
f_delta_meninggal scb 40 th1 = MGL_SB_40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK DPT AIR BER = 38.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta tanpa air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK DPT FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT FAS KES = 23.9
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f delta fas kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = (((((BUTA_HURUF)^3)+((MGL SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))

```
indeks_pendapatan = ((KONSM_ _PE_KAP
nilai_mit2_konsum_per__kapita_UNDP)/(nilai_maks konsum per  kapita UNDP-
nilai_mit1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks  lama sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_trp KK = AK-KESMPT KERJA
kontrol_konsum_per_kapita = nilai_maks_konsum per  kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_mit1_konsum_per__kapita_UNDP = 300000/1000
nilai_mit2_konsum_per__kapita_UNDP = 360000/1000
total delta kk = EKK*total_delta_konsum_per_kapita

delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.9), (2000, 0.91), (2001, 0.92), (2002, 0.00),
(2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0), (2010,
55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta fas kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 6.42), (2000, 6.86), (2001, 7.36), (2002,
0.00), (2003, 0.00), (2004, 53.0), (2005, 53.0), (2006, 53.0), (2007, 53.0), (2008, 53.0), (2009, 53.0),
(2010, 53.0), (2011, 53.0), (2012, 53.0), (2013, 53.0), (2014, 53.0), (2015, 53.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.83), (1997, 0.82), (1998, 0.82), (1999, 0.05), (2000, 0.05), (2001, 0.05), (2002,
2.17), (2003, 1.54), (2004, 1.44), (2005, 1.44), (2006, 1.44), (2007, 1.44), (2008, 1.44), (2009, 1.44),
(2010, 1.44), (2011, 1.44), (2012, 1.44), (2013, 1.44), (2014, 1.44), (2015, 1.44)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.91), (1996, 1.56), (1997, 1.54), (1998, 1.51), (1999, 0.86), (2000, 0.85), (2001, 0.84), (2002,
1.63), (2003, 1.64), (2004, 3.53), (2005, 3.53), (2006, 3.53), (2007, 3.53), (2008, 3.53), (2009, 3.53),
(2010, 3.53), (2011, 3.53), (2012, 3.53), (2013, 3.53), (2014, 3.53), (2015, 3.53)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.31), (2000, 0.00), (2001, 1.55), (2002,
0.00), (2003, 2.36), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 6.63), (1999, 0.00), (2000, 5.91), (2001, 0.00), (2002,
0.76), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.33), (1997, 0.33), (1998, 0.33), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.37), (2000, 0.37), (2001, 0.37), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 4.76), (1997, 4.55), (1998, 4.35), (1999, 2.78), (2000, 2.70), (2001, 2.63), (2002,
0.00), (2003, 6.35), (2004, 9.49), (2005, 9.49), (2006, 9.49), (2007, 9.49), (2008, 9.49), (2009, 9.49),
(2010, 9.49), (2011, 9.49), (2012, 9.49), (2013, 9.49), (2014, 9.49), (2015, 9.49)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 56.0), (2005, 56.0), (2006, 56.0), (2007, 56.0), (2008, 56.0), (2009, 56.0),
(2010, 56.0), (2011, 56.0), (2012, 56.0), (2013, 56.0), (2014, 56.0), (2015, 56.0)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.25), (2000, 2.20), (2001, 2.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
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delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.21), (2000, 0.21), (2001, 0.21), (2002, 0.00), (2003, 0.00), (2004, 52.0), (2005, 52.0), (2006, 52.0), (2007, 52.0), (2008, 52.0), (2009, 52.0), (2010, 52.0), (2011, 52.0), (2012, 52.0), (2013, 52.0), (2014, 52.0), (2015, 52.0)

delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)

rasio_TKK = GRAPH(time)
(1995, 1.02), (1996, 1.02), (1997, 1.02), (1998, 1.02), (1999, 1.04), (2000, 1.04), (2001, 1.03), (2002, 1.04), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06), (2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.97), (2005, 1.97), (2006, 1.97), (2007, 1.97), (2008, 1.97), (2009, 1.97), (2010, 1.97), (2011, 1.97), (2012, 1.97), (2013, 1.97), (2014, 1.97), (2015, 1.97)

REALITAS.

BALUTA_KR_GIZI(t) = BALUTA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi) * dt
INIT BALUTA_KR_GIZI = 33.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALUTA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALUTA_KR_GIZI/100

HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN_HIDUP = 64.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta harapan_hidup/100

HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 56.34
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100

KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f delta kk) * dt
INIT KESMPT_KERJA = 503872
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f delta_kk = KESMPT_KERJA*delta_kk/100

KONSM_PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 588.6
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100

LAMA__SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 4.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA SEKLAH*delta_lama_sekolah/100

MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta__meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 15.6
INFLOWS:
f_delta__meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal seb 40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL SB 40_THN*delta__meninggal_seb_40_th/100

TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 38.5
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100

TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 23.9
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100

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OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
delta_balita_kur_gizi1 = 0
HPI = ((((BUTA_HURUF^3)+((MGL_SB_40_THN)^3)+((layak_hidup^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum per kapita = nilai maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BAUTA  KR GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4,5*HDI-4,5*1/3*indeks__harapan__hidup-4,5*1/3*indeks_pendapatan-
4,5*1/9*indeks__lama_sekolah)
min_harapan hidup UNDP = 25
nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita  kur gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.9), (2000, 0.91), (2001, 0.92), (2002, 0.00),
(2003, 0.00), (2004, 0.926), (2005, 0.917), (2006, 0.909), (2007, 0.901), (2008, 0.893), (2009, 0.885),
(2010, 0.877), (2011, 0.87), (2012, 0.862), (2013, 0.855), (2014, 0.848), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 6.42), (2000, 6.86), (2001, 7.36), (2002,
0.00), (2003, 0.00), (2004, 7.93), (2005, 7.35), (2006, 6.84), (2007, 6.40), (2008, 6.02), (2009, 5.68),
(2010, 5.37), (2011, 5.10), (2012, 4.85), (2013, 4.63), (2014, 4.42), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta harapan hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.83), (1997, 0.82), (1998, 0.82), (1999, 0.05), (2000, 0.05), (2001, 0.05), (2002,
2.17), (2003, 1.54), (2004, 0.0439), (2005, 0.0439), (2006, 0.0438), (2007, 0.0438), (2008, 0.0438), (2009,
0.0438), (2010, 0.0438), (2011, 0.0437), (2012, 0.0437), (2013, 0.0437), (2014, 0.0437), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 0.91), (1996, 1.56), (1997, 1.54), (1998, 1.51), (1999, 0.86), (2000, 0.85), (2001, 0.84), (2002,
1.63), (2003, 1.64), (2004, 0.476), (2005, 0.473), (2006, 0.471), (2007, 0.469), (2008, 0.467), (2009,
0.465), (2010, 0.463), (2011, 0.46), (2012, 0.458), (2013, 0.456), (2014, 0.454), (2015, 0.00)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 3.31), (2000, 0.00), (2001, 1.55), (2002,
0.00), (2003, 2.36), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 6.63), (1999, 0.00), (2000, 5.91), (2001, 0.00), (2002,
0.76), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.33), (1997, 0.33), (1998, 0.33), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.37), (2000, 0.37), (2001, 0.37), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 4.76), (1997, 4.55), (1998, 4.35), (1999, 2.78), (2000, 2.70), (2001, 2.63), (2002,
0.00), (2003, 6.35), (2004, 2.35), (2005, 2.30), (2006, 2.25), (2007, 2.20), (2008, 2.15), (2009, 2.10),
(2010, 2.06), (2011, 2.02), (2012, 1.98), (2013, 1.94), (2014, 1.90), (2015, 0.00)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
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0.00), (2003, 0.00), (2004, 2.12), (2005, 2.07), (2006, 2.03), (2007, 1.99), (2008, 1.95), (2009, 1.91),
(2010, 1.88), (2011, 1.84), (2012, 1.81), (2013, 1.78), (2014, 1.75), (2015, 0.00)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 2.25), (2000, 2.20), (2001, 2.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb 40 th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.21), (2000, 0.21), (2001, 0.21), (2002,
0.00), (2003, 0.00), (2004, 0.194), (2005, 0.193), (2006, 0.193), (2007, 0.192), (2008, 0.192), (2009,
0.192), (2010, 0.191), (2011, 0.191), (2012, 0.191), (2013, 0.19), (2014, 0.19), (2015, 0.00)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.02), (1996, 1.02), (1997, 1.02), (1998, 1.02), (1999, 1.04), (2000, 1.04), (2001, 1.03), (2002,
1.04), (2003, 1.06), (2004, 1.06), (2005, 1.06), (2006, 1.06), (2007, 1.06), (2008, 1.06), (2009, 1.06),
(2010, 1.06), (2011, 1.06), (2012, 1.06), (2013, 1.06), (2014, 1.06), (2015, 1.06)
total delta konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.364), (2005, 0.362), (2006, 0.361), (2007, 0.36), (2008, 0.358), (2009, 0.357),
(2010, 0.356), (2011, 0.355), (2012, 0.353), (2013, 0.352), (2014, 0.351), (2015, 0.00)

KABUPATEN BANGKALAN:

SKENARIO 1.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 48.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita__kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 59.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 48.56
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 320849
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 575
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 3.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 24.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 43.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 44.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah_maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
maks_harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan__hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25

nilai_maks_konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.66), (2000, 1.63), (2001, 1.60), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 13.7), (2005, 13.7), (2006, 13.7), (2007, 13.7), (2008, 13.7), (2009, 13.7), (2010, 13.7), (2011, 13.7), (2012, 13.7), (2013, 13.7), (2014, 13.7), (2015, 13.7)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 14.0), (2005, 14.0), (2006, 14.0), (2007, 14.0), (2008, 14.0), (2009, 14.0), (2010, 14.0), (2011, 14.0), (2012, 14.0), (2013, 14.0), (2014, 14.0), (2015, 14.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 5.74), (2000, 5.43), (2001, 5.15), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.96), (1997, 0.95), (1998, 0.94), (1999, 0.27), (2000, 0.27), (2001, 0.27), (2002, 1.50), (2003, 0.13), (2004, 1.05), (2005, 1.05), (2006, 1.05), (2007, 1.05), (2008, 1.05), (2009, 1.05), (2010, 1.05), (2011, 1.05), (2012, 1.05), (2013, 1.05), (2014, 1.05), (2015, 1.05)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.12), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 3.79), (1996, 1.30), (1997, 1.29), (1998, 1.27), (1999, 3.29), (2000, 3.19), (2001, 3.09), (2002, 0.89), (2003, 0.00), (2004, 2.71), (2005, 2.71), (2006, 2.71), (2007, 2.71), (2008, 2.71), (2009, 2.71), (2010, 2.71), (2011, 2.71), (2012, 2.71), (2013, 2.71), (2014, 2.71), (2015, 2.71)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 2.81), (2001, 6.27), (2002, 0.00), (2003, 15.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.06), (1999, 9.42), (2000, 0.00), (2001, 0.00), (2002, 19.4), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.21), (2000, 1.20), (2001, 1.18), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 3.20), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 5.21), (1997, 4.95), (1998, 4.72), (1999, 11.7), (2000, 10.5), (2001, 9.49), (2002, 0.00), (2003, 0.00), (2004, 5.80), (2005, 5.80), (2006, 5.80), (2007, 5.80), (2008, 5.80), (2009, 5.80), (2010, 5.80), (2011, 5.80), (2012, 5.80), (2013, 5.80), (2014, 5.80), (2015, 5.80)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.6), (2001, 15.7), (2002, 0.00), (2003, 0.00), (2004, 8.88), (2005, 8.88), (2006, 8.88), (2007, 8.88), (2008, 8.88), (2009, 8.88), (2010, 8.88), (2011, 8.88), (2012, 8.88), (2013, 8.88), (2014, 8.88), (2015, 8.88)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.61), (2000, 1.64), (2001, 1.67), (2002, 0.00), (2003, 0.00), (2004, 7.51), (2005, 7.51), (2006, 7.51), (2007, 7.51), (2008, 7.51), (2009, 7.51), (2010, 7.51), (2011, 7.51), (2012, 7.51), (2013, 7.51), (2014, 7.51), (2015, 7.51)
delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,

0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.04), (2001, 1.04), (2002, 1.06), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.66), (2005, 1.66), (2006, 1.66), (2007, 1.66), (2008, 1.66), (2009, 1.66), (2010, 1.66), (2011, 1.66), (2012, 1.66), (2013, 1.66), (2014, 1.66), (2015, 1.66)

SKENARIO 2.

BALITA__KR_GIZI(t) = BALITA__KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BALITA__KR_GIZI = 48.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA__KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA__KR_GIZI/100
HARPN__HIDUP(t) = HARPN__HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta__harapan_hidup) * dt
INIT HARPN__HIDUP = 59.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN__HIDUP)/100
OUTFLOWS:
f_delta__harapan_hidup = HARPN__HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 48.56
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 320849
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM__PE_KAP(t) = KONSM__PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM__PE_KAP = 575
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM__PE_KAP*delta_konsum_per_kapita1/100)+(KONSM__PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM__PE_KAP*delta_konsum_per_kapita/100
LAMA__SEKLAH(t) = LAMA__SEKLAH(t - dt) + (f_delta_lama__sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA__SEKLAH = 3.2
INFLOWS:
f_delta_lama__sekolah1 = (delta_lama_sekolah1*LAMA__SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA__SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb_40_th1 - f_delta__meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 24.8
INFLOWS:
f_delta_meninggal_seb_40_th1 = MGL_SB_40_THN*delta__meninggal_seb_40_th1/100
OUTFLOWS:
f_delta__meninggal_seb_40_th = MGL_SB_40_THN*delta__meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) * dt
INIT TDK_DPT_AIR_BER = 43.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 44.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
HPI = (((((BUTA_HURUF)^3}+((MGL_SB_40_THN)^3)+((layak_hidup}^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-nilai_min1_konsum_per__kapita_UNDP))*100
Indeks__harapan__hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-min_harapan_hidup_UNDP)*100

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indeks_lama_sekolah = ((LAMA_SEKLAH-0)/(lama sekolah maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per_kapita_UNDP-KONSM_PE_KAP
lama_sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BALITA_KR_GIZI)
maks harapan_hidup_UNDP = 85
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks_harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks_lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks_konsum_per_kapita_UNDP = 732720/1000
nilai_min1_konsum_per_kapita_UNDP = 300000/1000
nilai_min2_konsum per kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum per kapita
delta_balita_kur_gizi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.66), (2000, 1.63), (2001, 1.60), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita  kur gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 19.0), (2005, 19.0), (2006, 19.0), (2007, 19.0), (2008, 19.0), (2009, 19.0),
(2010, 19.0), (2011, 19.0), (2012, 19.0), (2013, 19.0), (2014, 19.0), (2015, 19.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 5.74), (2000, 5.43), (2001, 5.15), (2002,
19.2), (2012, 19.2), (2013, 19.2), (2014, 19.2), (2015, 19.2)
(2004, 19.2), (2005, 19.2), (2006, 19.2), (2007, 19.2), (2008, 19.2), (2009, 19.2), (2010, 19.2), (2011,
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00),
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.96), (1997, 0.95), (1998, 0.94), (1999, 0.27), (2000, 0.27), (2001, 0.27), (2002,
1.50), (2003, 0.13), (2004, 1.69), (2005, 1.69), (2006, 1.69), (2007, 1.69), (2008, 1.69), (2009, 1.69),
(2010, 1.69), (2011, 1.69), (2012, 1.69), (2013, 1.69), (2014, 1.69), (2015, 1.69)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.12), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 3.79), (1996, 1.30), (1997, 1.29), (1998, 1.27), (1999, 3.29), (2000, 3.19), (2001, 3.09), (2002,
0.89), (2003, 0.00), (2004, 3.55), (2005, 3.55), (2006, 3.55), (2007, 3.55), (2008, 3.55), (2009, 3.55),
(2010, 3.55), (2011, 3.55), (2012, 3.55), (2013, 3.55), (2014, 3.55), (2015, 3.55)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 2.81), (2001, 6.27), (2002,
0.00), (2003, 15.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.06), (1999, 9.42), (2000, 0.00), (2001, 0.00), (2002,
19.4), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 1.18), (1997, 0.00), (1998, 0.00), (1999, 1.21), (2000, 1.20), (2001, 1.18), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 3.20), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 5.21), (1997, 4.95), (1998, 4.72), (1999, 11.7), (2000, 10.5), (2001, 9.49), (2002,
0.00), (2003, 0.00), (2004, 8.61), (2005, 8.61), (2006, 8.61), (2007, 8.61), (2008, 8.61), (2009, 8.61),
(2010, 8.61), (2011, 8.61), (2012, 8.61), (2013, 8.61), (2014, 8.61), (2015, 8.61)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.6), (2001, 15.7), (2002,
0.00), (2003, 0.00), (2004, 14.4), (2005, 14.4), (2006, 14.4), (2007, 14.4), (2008, 14.4), (2009, 14.4),
(2010, 14.4), (2011, 14.4), (2012, 14.4), (2013, 14.4), (2014, 14.4), (2015, 14.4)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
```

delta_meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.61), (2000, 1.64), (2001, 1.67), (2002, 0.00), (2003, 0.00), (2004, 13.2), (2005, 13.2), (2006, 13.2), (2007, 13.2), (2008, 13.2), (2009, 13.2), (2010, 13.2), (2011, 13.2), (2012, 13.2), (2013, 13.2), (2014, 13.2), (2015, 13.2)
delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.04), (2001, 1.04), (2002, 1.06), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.86), (2005, 1.86), (2006, 1.86), (2007, 1.86), (2008, 1.86), (2009, 1.86), (2010, 1.86), (2011, 1.86), (2012, 1.86), (2013, 1.86), (2014, 1.86), (2015, 1.86)

SKENARIO 3.

BAUTA_KR_GIZI(t) = BAUTA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi1 - f_delta_balita_kur_gizi) * dt
INIT BAUTA_KR_GIZI = 48.3
INFLOWS:
f delta balita kur gizi1 = BAUTA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BAUTA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 59.2
INFLOWS:
f_delta_harapan_hidup1 = (delta harapan hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 48.56
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 320849
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita) * dt
INIT KONSM_PE_KAP = 575
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum per kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f delta lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 3.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_meninggal_seb 40 th1 - f_delta_meninggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 24.8
INFLOWS:
f_delta_meninggal_seb 40 th1 = MGL SB 40_THN*delta_meninggal_seb_40_th1/100
OUTFLOWS:
f_delta_meninggal_seb_40_th = MGL_SB_40_THN*delta_meninggal_seb_40_th/100
TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f delta tanpa air bersih) * dt
INIT TDK_DPT AIR BER = 43.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa air bersih1/100
OUTFLOWS:
f_delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 44.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT FAS KES*delta_fas_kes1/100

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OUTFLOWS:
f_delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*rasio_TKK
BUTA_HURUF = 100-MELEK_HURUF
HPI = (((((BUTA_HURUF)^3)+((MGL_SB_40_THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks_harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol_konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama sekolah_maks_UNDP = 15
layak_hidup = 1/3*(TDK_DPT_AIR_BER+TDK_DPT_FAS_KES+BAUTA__KR_GIZI)
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan_hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai maks konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita_UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita_kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.66), (2000, 1.63), (2001, 1.60), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 57.0), (2006, 57.0), (2007, 57.0), (2008, 57.0), (2009, 57.0),
(2010, 57.0), (2011, 57.0), (2012, 57.0), (2013, 57.0), (2014, 57.0), (2015, 57.0)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00),
(2004, 57.0), (2005, 57.0), (2006, 57.0), (2007, 57.0), (2008, 57.0), (2009, 57.0), (2010, 57.0), (2011,
57.0), (2012, 57.0), (2013, 57.0), (2014, 57.0), (2015, 57.0)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 5.74), (2000, 5.43), (2001, 5.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.95), (1998, 0.94), (1999, 0.27), (2000, 0.27), (2001, 0.27), (2002,
1.50), (2003, 0.13), (2004, 2.29), (2005, 2.29), (2006, 2.29), (2007, 2.29), (2008, 2.29), (2009, 2.29),
(2010, 2.29), (2011, 2.29), (2012, 2.29), (2013, 2.29), (2014, 2.29), (2015, 2.29)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta hdi1 = GRAPH(time)
(1995, 3.79), (1996, 1.30), (1997, 1.29), (1998, 1.27), (1999, 3.29), (2000, 3.19), (2001, 3.09), (2002,
0.89), (2003, 0.00), (2004, 4.33), (2005, 4.33), (2006, 4.33), (2007, 4.33), (2008, 4.33), (2009, 4.33),
(2010, 4.33), (2011, 4.33), (2012, 4.33), (2013, 4.33), (2014, 4.33), (2015, 4.33)
delta_kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 2.81), (2001, 6.27), (2002,
0.00), (2003, 15.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.06), (1999, 9.42), (2000, 0.00), (2001, 0.00), (2002,
19.4), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.21), (2000, 1.20), (2001, 1.18), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 3.20), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 5.21), (1997, 4.95), (1998, 4.72), (1999, 11.7), (2000, 10.5), (2001, 9.49), (2002,
```

0.00), (2003, 0.00), (2004, 10.8), (2005, 10.8), (2006, 10.8), (2007, 10.8), (2008, 10.8), (2009, 10.8),
(2010, 10.8), (2011, 10.8), (2012, 10.8), (2013, 10.8), (2014, 10.8), (2015, 10.8)
delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.6), (2001, 15.7), (2002,
0.00), (2003, 0.00), (2004, 55.0), (2005, 55.0), (2006, 55.0), (2007, 55.0), (2008, 55.0), (2009, 55.0),
(2010, 55.0), (2011, 55.0), (2012, 55.0), (2013, 55.0), (2014, 55.0), (2015, 55.0)
delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_tanpa_air_bersih_40 th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.61), (2000, 1.64), (2001, 1.67), (2002,
0.00), (2003, 0.00), (2004, 54.0), (2005, 54.0), (2006, 54.0), (2007, 54.0), (2008, 54.0), (2009, 54.0),
(2010, 54.0), (2011, 54.0), (2012, 54.0), (2013, 54.0), (2014, 54.0), (2015, 54.0)
delta_meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003,
0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00),
(2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00),
(2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)
rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.04), (2001, 1.04), (2002,
1.06), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03),
(2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)
total_delta_konsum_per kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 2.05), (2005, 2.05), (2006, 2.05), (2007, 2.05), (2008, 2.05), (2009, 2.05),
(2010, 2.05), (2011, 2.05), (2012, 2.05), (2013, 2.05), (2014, 2.05), (2015, 2.05)

REALITAS.

BALITA_KR_GIZI(t) = BALITA_KR_GIZI(t - dt) + (f_delta_balita_kur_gizi - f_delta_balita_kur_gizi) * dt
INIT BALITA_KR_GIZI = 48.3
INFLOWS:
f_delta_balita_kur_gizi1 = BALITA_KR_GIZI*delta_balita_kur_gizi1/100
OUTFLOWS:
f_delta_balita_kur_gizi = delta_balita_kur_gizi*BALITA_KR_GIZI/100
HARPN_HIDUP(t) = HARPN_HIDUP(t - dt) + (f_delta_harapan_hidup1 - f_delta_harapan_hidup) * dt
INIT HARPN_HIDUP = 59.2
INFLOWS:
f_delta_harapan_hidup1 = (delta_harapan_hidup1*HARPN_HIDUP)/100
OUTFLOWS:
f_delta_harapan_hidup = HARPN_HIDUP*delta_harapan_hidup/100
HDI(t) = HDI(t - dt) + (f_hdi1 - f_hdi) * dt
INIT HDI = 48.56
INFLOWS:
f_hdi1 = (delta_hdi1*HDI)/100
OUTFLOWS:
f_hdi = (HDI*delta_hdi)/100
KESMPT_KERJA(t) = KESMPT_KERJA(t - dt) + (f_delta_kk1 - f_delta_kk) * dt
INIT KESMPT_KERJA = 320849
INFLOWS:
f_delta_kk1 = (KESMPT_KERJA*delta_kk1/100)+(KESMPT_KERJA*total_delta_kk/100)
OUTFLOWS:
f_delta_kk = KESMPT_KERJA*delta_kk/100
KONSM_PE_KAP(t) = KONSM_PE_KAP(t - dt) + (f_delta_konsum_per_kapita1 - f_delta_konsum_per_kapita)
* dt
INIT KONSM_PE_KAP = 575
INFLOWS:
f_delta_konsum_per_kapita1 =
(KONSM_PE_KAP*delta_konsum_per_kapita1/100)+(KONSM_PE_KAP*total_delta_konsum_per_kapita/100)
OUTFLOWS:
f_delta_konsum_per_kapita = KONSM_PE_KAP*delta_konsum_per_kapita/100
LAMA_SEKLAH(t) = LAMA_SEKLAH(t - dt) + (f_delta_lama_sekolah1 - f_delta_lama_sekolah) * dt
INIT LAMA_SEKLAH = 3.2
INFLOWS:
f_delta_lama_sekolah1 = (delta_lama_sekolah1*LAMA_SEKLAH)/100
OUTFLOWS:
f_delta_lama_sekolah = LAMA_SEKLAH*delta_lama_sekolah/100
MGL_SB_40_THN(t) = MGL_SB_40_THN(t - dt) + (f_delta_menggal_seb_40_th1 -
f_delta_menggal_seb_40_th) * dt
INIT MGL_SB_40_THN = 24.8
INFLOWS:
f_delta_menggal_seb_40_th1 = MGL_SB_40_THN*delta_menggal_seb_40_th1/100
OUTFLOWS:
f_delta_menggal seb 40_th = MGL_SB_40_THN*delta_menggal seb_40_th/100

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TDK_DPT_AIR_BER(t) = TDK_DPT_AIR_BER(t - dt) + (f_delta_tanpa_air_bersih1 - f_delta_tanpa_air_bersih) *
dt
INIT TDK_DPT_AIR_BER = 43.3
INFLOWS:
f_delta_tanpa_air_bersih1 = TDK_DPT_AIR_BER*delta_tanpa_air_bersih1/100
OUTFLOWS:
f delta_tanpa_air_bersih = delta_tanpa_air_bersih*TDK_DPT_AIR_BER/100
TDK_DPT_FAS_KES(t) = TDK_DPT_FAS_KES(t - dt) + (f_delta_fas_kes1 - f_delta_fas_kes) * dt
INIT TDK_DPT_FAS_KES = 44.7
INFLOWS:
f_delta_fas_kes1 = TDK_DPT_FAS_KES*delta_fas_kes1/100
OUTFLOWS:
f delta_fas_kes = TDK_DPT_FAS_KES*delta_fas_kes/100
AK = KESMPT_KERJA*ratio_TKK
BUTA_HURUF = 100-MELEK_HURUF
HPI = (((((BUTA_HURUF)^3)+((MGI_SB_40 THN)^3)+((layak_hidup)^3))/3)^(1/3))
indeks_pendapatan = ((KONSM__PE_KAP-
nilai_min2_konsum_per__kapita_UNDP)/(nilai_maks_konsum_per__kapita_UNDP-
nilai_min1_konsum_per__kapita_UNDP))*100
indeks__harapan_hidup = (HARPN__HIDUP-min_harapan_hidup_UNDP)/(maks_harapan_hidup_UNDP-
min_harapan_hidup_UNDP)*100
indeks__lama_sekolah = ((LAMA__SEKLAH-0)/(lama_sekolah maks_UNDP-0))*100
kontrol_AK_thp_KK = AK-KESMPT_KERJA
kotrol konsum_per_kapita = nilai_maks_konsum_per__kapita_UNDP-KONSM__PE_KAP
lama_sekolah maks UNDP = 15
layak_hidup = 1/3*(TDK DPT AIR_BER+TDK_DPT_FAS_KES+BALITA__KR_GIZI)
MELEK_HURUF = (4.5*HDI-4.5*1/3*indeks__harapan  hidup-4.5*1/3*indeks_pendapatan-
4.5*1/9*indeks__lama_sekolah)
min_harapan_hidup_UNDP = 25
nilai_maks konsum_per__kapita_UNDP = 732720/1000
nilai_min1_konsum_per__kapita UNDP = 300000/1000
nilai_min2_konsum_per__kapita_UNDP = 360000/1000
total_delta_kk = EKK*total_delta_konsum_per_kapita
delta_balita__kur_gizi1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.66), (2000, 1.63), (2001, 1.60), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_balita__kur_gizi = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 1.58), (2005, 1.55), (2006, 1.53), (2007, 1.51), (2008, 1.48), (2009, 1.46),
(2010, 1.44), (2011, 1.42), (2012, 1.40), (2013, 1.38), (2014, 1.36), (2015, 0.00)
delta_fas_kes = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00),
(2004, 4.90), (2005, 4.68), (2006, 4.47), (2007, 4.28), (2008, 4.10), (2009, 3.94), (2010, 3.79), (2011,
3.65), (2012, 3.52), (2013, 3.40), (2014, 3.29), (2015, 0.00)
delta_fas_kes1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 5.74), (2000, 5.43), (2001, 5.15), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_harapan_hidup1 = GRAPH(time)
(1995, 0.00), (1996, 0.96), (1997, 0.95), (1998, 0.94), (1999, 0.27), (2000, 0.27), (2001, 0.27), (2002,
1.50), (2003, 0.13), (2004, 0.272), (2005, 0.272), (2006, 0.271), (2007, 0.27), (2008, 0.27), (2009, 0.269),
(2010, 0.268), (2011, 0.267), (2012, 0.267), (2013, 0.266), (2014, 0.265), (2015, 0.00)
delta_hdi = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.12), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_hdi1 = GRAPH(time)
(1995, 3.79), (1996, 1.30), (1997, 1.29), (1998, 1.27), (1999, 3.29), (2000, 3.19), (2001, 3.09), (2002,
0.89), (2003, 0.00), (2004, 1.72), (2005, 1.70), (2006, 1.67), (2007, 1.64), (2008, 1.61), (2009, 1.59),
(2010, 1.56), (2011, 1.54), (2012, 1.52), (2013, 1.49), (2014, 1.47), (2015, 0.00)
delta kk = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 2.81), (2001, 6.27), (2002,
0.00), (2003, 15.9), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_kk1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 7.06), (1999, 9.42), (2000, 0.00), (2001, 0.00), (2002,
19.4), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)
delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.66), (1997, 0.67), (1998, 0.67), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002,
0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00),
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(2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

delta_konsum_per_kapita1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.21), (2000, 1.20), (2001, 1.18), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

delta_lama_sekolah = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 3.20), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

delta_lama_sekolah1 = GRAPH(time)
(1995, 0.00), (1996, 5.21), (1997, 4.95), (1998, 4.72), (1999, 11.7), (2000, 10.5), (2001, 9.49), (2002, 0.00), (2003, 0.00), (2004, 8.88), (2005, 8.16), (2006, 7.54), (2007, 7.01), (2008, 6.55), (2009, 6.15), (2010, 5.80), (2011, 5.48), (2012, 5.19), (2013, 4.94), (2014, 4.70), (2015, 0.00)

delta_tanpa_air_bersih = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 11.9), (2000, 13.6), (2001, 15.7), (2002, 0.00), (2003, 0.00), (2004, 18.6), (2005, 15.7), (2006, 13.6), (2007, 11.9), (2008, 10.7), (2009, 9.64), (2010, 8.79), (2011, 8.08), (2012, 7.48), (2013, 6.96), (2014, 6.50), (2015, 0.00)

delta_tanpa_air_bersih1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

delta__meninggal_seb_40_th = GRAPH(TIME)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 1.61), (2000, 1.64), (2001, 1.67), (2002, 0.00), (2003, 0.00), (2004, 1.69), (2005, 1.67), (2006, 1.64), (2007, 1.61), (2008, 1.59), (2009, 1.56), (2010, 1.54), (2011, 1.52), (2012, 1.49), (2013, 1.47), (2014, 1.45), (2015, 0.00)

delta__meninggal_seb_40_th1 = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 0.00), (2005, 0.00), (2006, 0.00), (2007, 0.00), (2008, 0.00), (2009, 0.00), (2010, 0.00), (2011, 0.00), (2012, 0.00), (2013, 0.00), (2014, 0.00), (2015, 0.00)

EKK = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.00), (2005, 1.00), (2006, 1.00), (2007, 1.00), (2008, 1.00), (2009, 1.00), (2010, 1.00), (2011, 1.00), (2012, 1.00), (2013, 1.00), (2014, 1.00), (2015, 1.00)

rasio_TKK = GRAPH(time)
(1995, 1.05), (1996, 1.05), (1997, 1.05), (1998, 1.05), (1999, 1.06), (2000, 1.04), (2001, 1.04), (2002, 1.06), (2003, 1.03), (2004, 1.03), (2005, 1.03), (2006, 1.03), (2007, 1.03), (2008, 1.03), (2009, 1.03), (2010, 1.03), (2011, 1.03), (2012, 1.03), (2013, 1.03), (2014, 1.03), (2015, 1.03)

total_delta_konsum_per_kapita = GRAPH(time)
(1995, 0.00), (1996, 0.00), (1997, 0.00), (1998, 0.00), (1999, 0.00), (2000, 0.00), (2001, 0.00), (2002, 0.00), (2003, 0.00), (2004, 1.17), (2005, 1.16), (2006, 1.14), (2007, 1.13), (2008, 1.12), (2009, 1.10), (2010, 1.09), (2011, 1.08), (2012, 1.07), (2013, 1.06), (2014, 1.05), (2015, 0.00)

LAMPIRAN 3

KOOFISIEN KORELASI ANTARA VARIABEL KESEMPATAN KERJA DAN HUMAN POVERTY INDEX (HPI) DARI PROVINSI DAN SETIAP KOTA/KABUPATEN DI JAWA TIMUR.

MASING-MASING BERDASARKAN SKENARIO MDGs, YAITU DALAM SKENARIO 1, SKENARIO 2, SKENARIO 3 DAN REALITAS.

DISELESAIKAN DENGAN MEMAKAI PROGRAM SPSS VERSI 11.

SKENARIO 1.

		KK Jawa Timur	HPI Jawa Timur
KK Jawa Timur	Pearson Correlation	1	-.964**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jawa Timur	Pearson Correlation	-.964**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Surabaya	HPI Surabaya
KK Surabaya	Pearson Correlation	1	-.595**
	Sig. (2-tailed)	.	.004
	N	21	21
HPI Surabaya	Pearson Correlation	-.595**	1
	Sig. (2-tailed)	.004	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Malang	HPI Malang
KK Malang	Pearson Correlation	1	-.859**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Malang	Pearson Correlation	-.859**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Pacitan	HPI Pacitan
KK Pacitan	Pearson Correlation	1	-.934**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Pacitan	Pearson Correlation	-.934**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tulungagung	HPI Tulungagung
KK Tulungagung	Pearson Correlation	1	-.875**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tulungagung	Pearson Correlation	-.875**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Jember	HPI Jember
KK Jember	Pearson Correlation	1	-.944**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jember	Pearson Correlation	-.944**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Banyuwangi	HPI Banyuwangi
KK Banyuwangi	Pearson Correlation	1	-.873**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Banyuwangi	Pearson Correlation	-.873**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Sidoarjo	HPI Sidoarjo
KK Sidoarjo	Pearson Correlation	1	-.969**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Sidoarjo	Pearson Correlation	-.969**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Nganjuk	HPI Nganjuk
KK Nganjuk	Pearson Correlation	1	-.902**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Nganjuk	Pearson Correlation	-.902**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tuban	HPI Tuban
KK Tuban	Pearson Correlation	1	-.973**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tuban	Pearson Correlation	-.973**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Bangkalan	HPI Bangkalan
KK Bangkalan	Pearson Correlation	1	-.804**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Bangkalan	Pearson Correlation	-.804**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

SKENARIO 2.

		KK Jawa Timur	HPI Jawa Timur
KK Jawa Timur	Pearson Correlation	1	-.963**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jawa Timur	Pearson Correlation	-.963**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Surabaya	HPI Surabaya
KK Surabaya	Pearson Correlation	1	-.783**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Surabaya	Pearson Correlation	-.783**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Malang	HPI Malang
KK Malang	Pearson Correlation	1	-.884**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Malang	Pearson Correlation	-.884**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Pacitan	HPI Pacitan
KK Pacitan	Pearson Correlation	1	-.945**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Pacitan	Pearson Correlation	-.945**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tulungagung	HPI Tulungagung
KK Tulungagung	Pearson Correlation	1	-.900**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tulungagung	Pearson Correlation	-.900**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Jember	HPI Jember
KK Jember	Pearson Correlation	1	-.942**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jember	Pearson Correlation	-.942**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Banyuwangi	HPI Banyuwangi
KK Banyuwangi	Pearson Correlation	1	-.888**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Banyuwangi	Pearson Correlation	-.888**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Sidoarjo	HPI Sidoarjo
KK Sidoarjo	Pearson Correlation	1	-.962**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Sidoarjo	Pearson Correlation	-.962**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Nganjuk	HPI Nganjuk
KK Nganjuk	Pearson Correlation	1	-.918**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Nganjuk	Pearson Correlation	-.918**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tuban	HPI Tuban
KK Tuban	Pearson Correlation	1	-.972**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tuban	Pearson Correlation	-.972**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Bangkalan	HPI Bangkalan
KK Bangkalan	Pearson Correlation	1	-.821**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Bangkalan	Pearson Correlation	-.821**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

SKENARIO 3.

		KK Jawa Timur	HPI Jawa Timur
KK Jawa Timur	Pearson Correlation	1	-.927**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jawa Timur	Pearson Correlation	-.927**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Surabaya	HPI Surabaya
KK Surabaya	Pearson Correlation	1	-.762**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Surabaya	Pearson Correlation	-.762**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Malang	HPI Malang
KK Malang	Pearson Correlation	1	-.821**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Malang	Pearson Correlation	-.821**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Pacitan	HPI Pacitan
KK Pacitan	Pearson Correlation	1	-.904**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Pacitan	Pearson Correlation	-.904**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tulungagung	HPI Tulungagung
KK Tulungagung	Pearson Correlation	1	-.857**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tulungagung	Pearson Correlation	-.857**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Jember	HPI Jember
KK Jember	Pearson Correlation	1	-.893**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jember	Pearson Correlation	-.893**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Banyuwangi	HPI Banyuwangi
KK Banyuwangi	Pearson Correlation	1	-.827**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Banyuwangi	Pearson Correlation	-.827**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Sidoarjo	HPI Sidoarjo
KK Sidoarjo	Pearson Correlation	1	-.906**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Sidoarjo	Pearson Correlation	-.906**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Nganjuk	HPI Nganjuk
KK Nganjuk	Pearson Correlation	1	-.898**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Nganjuk	Pearson Correlation	-.898**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tuban	HPI Tuban
KK Tuban	Pearson Correlation	1	-.951**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tuban	Pearson Correlation	-.951**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Bangkalan	HPI Bangkalan
KK Bangkalan	Pearson Correlation	1	-.805**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Bangkalan	Pearson Correlation	-.805**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

REALITAS.

		KK Jawa Timur	HPI Jawa Timur
KK Jawa Timur	Pearson Correlation	1	-.920**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jawa Timur	Pearson Correlation	-.920**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Surabaya	HPI Surabaya
KK Surabaya	Pearson Correlation	1	-.509*
	Sig. (2-tailed)	.	.018
	N	21	21
HPI Surabaya	Pearson Correlation	-.509*	1
	Sig. (2-tailed)	.018	.
	N	21	21

*. Correlation is significant at the 0.05 level (2-tailed).

		KK Malang	HPI Malang
KK Malang	Pearson Correlation	1	-.855**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Malang	Pearson Correlation	-.855**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Pacitan	HPI Pacitan
KK Pacitan	Pearson Correlation	1	-.843**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Pacitan	Pearson Correlation	-.843**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tulungagung	HPI Tulungagung
KK Tulungagung	Pearson Correlation	1	-.531*
	Sig. (2-tailed)	.	.013
	N	21	21
HPI Tulungagung	Pearson Correlation	-.531*	1
	Sig. (2-tailed)	.013	.
	N	21	21

*. Correlation is significant at the 0.05 level (2-tailed).

		KK Jember	HPI Jember
KK Jember	Pearson Correlation	1	-.854**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Jember	Pearson Correlation	-.854**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Banyuwangi	HPI Banyuwangi
KK Banyuwangi	Pearson Correlation	1	-.240
	Sig. (2-tailed)	.	.296
	N	21	21
HPI Banyuwangi	Pearson Correlation	-.240	1
	Sig. (2-tailed)	.296	.
	N	21	21

		KK Sidoarjo	HPI Sidoarjo
KK Sidoarjo	Pearson Correlation	1	-.954**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Sidoarjo	Pearson Correlation	-.954**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Nganjuk	HPI Nganjuk
KK Nganjuk	Pearson Correlation	1	-.764**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Nganjuk	Pearson Correlation	-.764**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Tuban	HPI Tuban
KK Tuban	Pearson Correlation	1	-.884**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Tuban	Pearson Correlation	-.884**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).

		KK Bangkalan	HPI Bangkalan
KK Bangkalan	Pearson Correlation	1	-.722**
	Sig. (2-tailed)	.	.000
	N	21	21
HPI Bangkalan	Pearson Correlation	-.722**	1
	Sig. (2-tailed)	.000	.
	N	21	21

**. Correlation is significant at the 0.01 level (2-tailed).