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(SMADM)

AHP

GIS

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.(Santos et al., 2001)

SWSI SPI PDSI

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Palmer 1965; Alley 1984; Byun and Wilhite 1999; Wu)

.(et al., 2001 ()

.(Barua, 2009) ()

(Multi-Attribute

.(Bazza, 2006)

Decision Making)

(Geographical Information System)

(Spatial Multi-Attribute Decision

Making)

()

(Laskar, 2003)

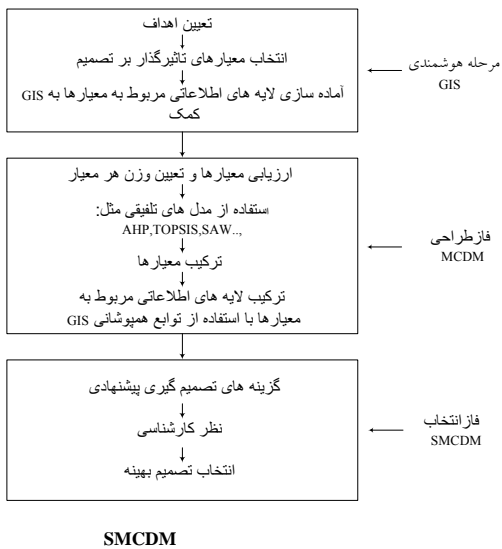
SMADM

(Salemi et al., 2000)

SMADM

(2006)

(Svoray et al., 2005)



GIS

MADM

GIS MADM

(SPI)

(PDSI)

(SWSI)

SMCDM

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(SMADM)

(Prakash, 2003)

(Jankowski, 1995)

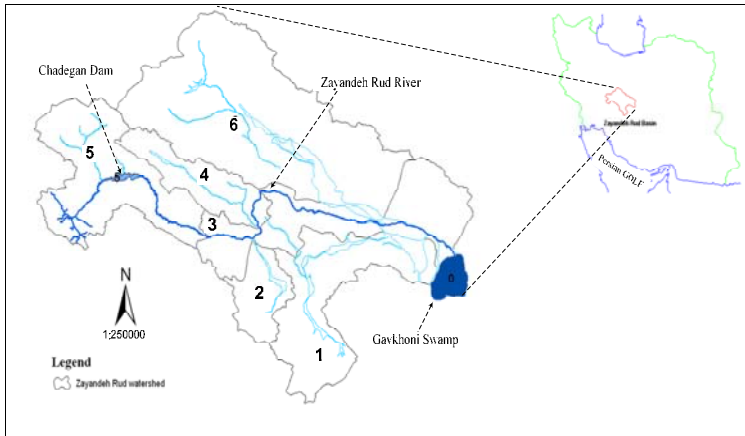
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SMADM

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AHP

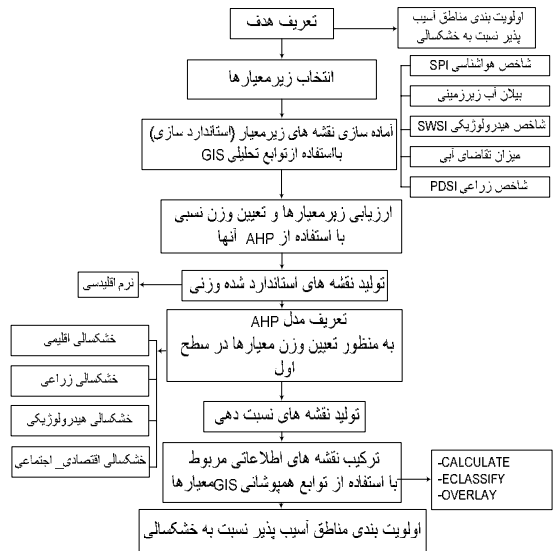
(Saaty, 1994)

(D1)

(D4)

(D3)

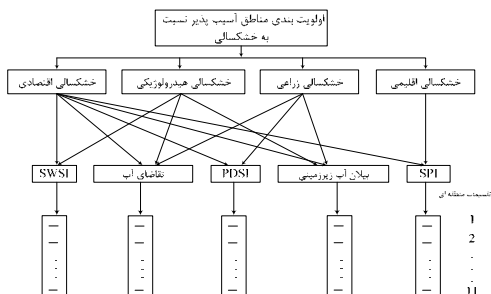
(D2)



(Malczewski, 2006)

SWSI PDSI SPI

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MADM

(AHP)

AHP .

(Decision Makers)

AHP

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/	SWSI
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/	PDSI
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/	SPI
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/	PDSI
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/	SWSI

(Kirkwood, 1997)

AHP

DM

DM

$m \times m$

A

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$$a = (\alpha_{ij})_{m \times m} = \begin{matrix} D_1 & D_2 & D_3 & D_4 \\ D_1 & 1 & 4 & 3 & 2 \\ D_2 & 0.25 & 1 & 4 & 3 \\ D_3 & 0.33 & 0.25 & 1 & 3 \\ D_4 & 0.5 & 0.33 & 0.33 & 1 \end{matrix} \Rightarrow \begin{matrix} W \\ 0.48 \\ 0.28 \\ 0.14 \\ 0.13 \end{matrix}$$

$$a_{ij} = \frac{1}{a_{ji}} \quad a_{ij} = 1 \quad a_{ij}$$

(i, j)

W

A

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GIS (Overlay) A

W

λ_{max}

$$AW = \lambda_{max} W$$

A

PDSI ()

PDSI

(A)

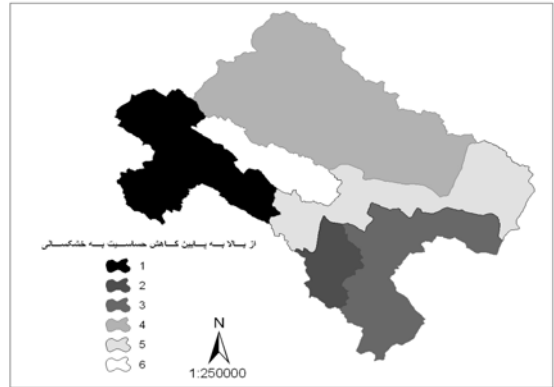
$$(= 0.25 \times 0.13 + 0.55 \times 0.28)$$

(/)

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GIS



AHP

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(SMADM) GIS

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