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( ) GIS  
(Sicat, et al., 2005)

(Chen, et al., 2003)  
FAO

/ ) Microstation-DGN  
) ( (Kalogirou, 2002)  
(۱۳۷۳

( ) (Caldiz, et al., 2001)  
۱۶۳-۳۵

(GPS)<sup>5</sup>  
map 76C GARMIN

(GCP)<sup>6</sup>

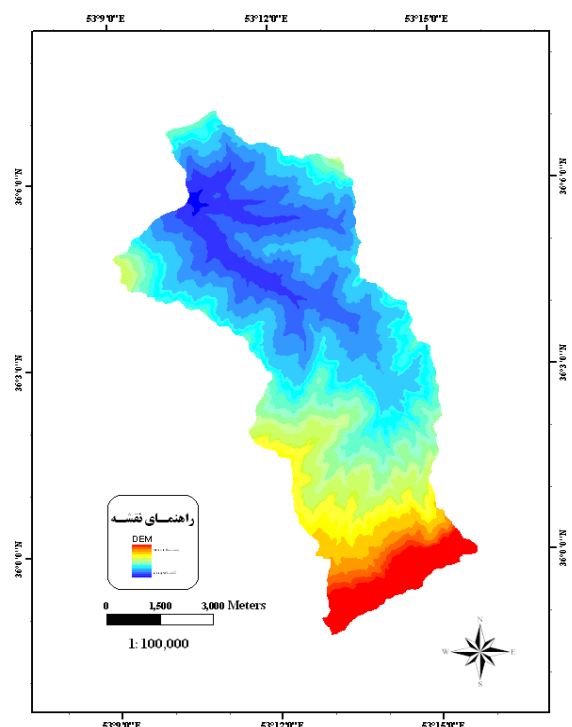
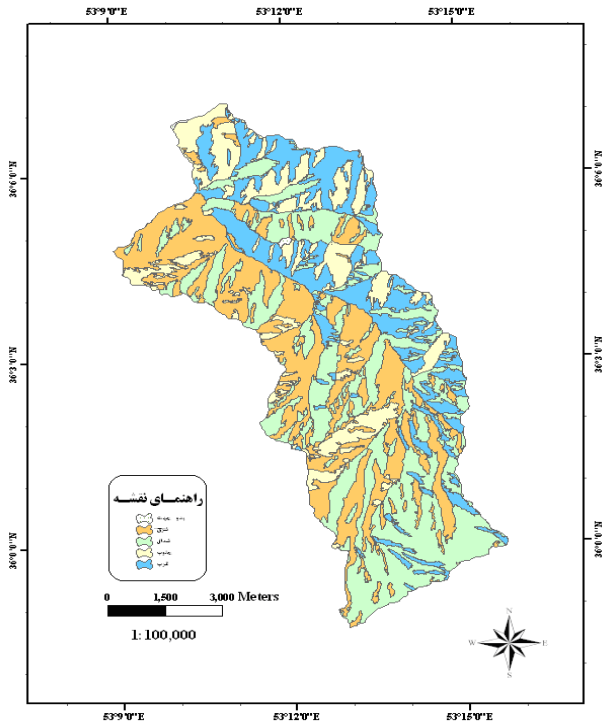
Ilwis Arcview 3.2a P. C. ArcInfo 3.5.1 AutoCAD 14  
M. S. M. S. Excel 2003 Surfer 8.05 academic 3.0  
Visual FoxPro 6.0

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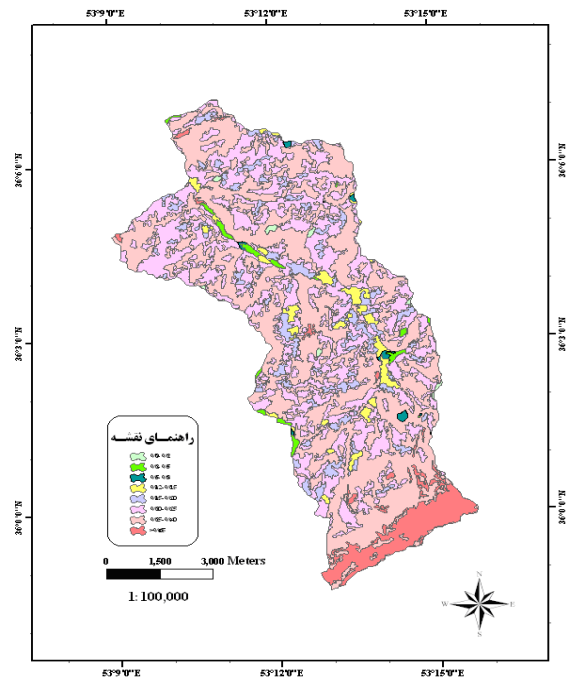
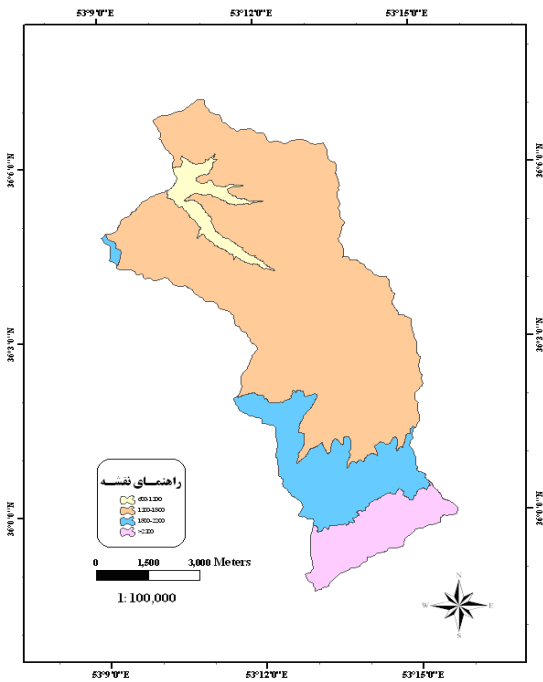


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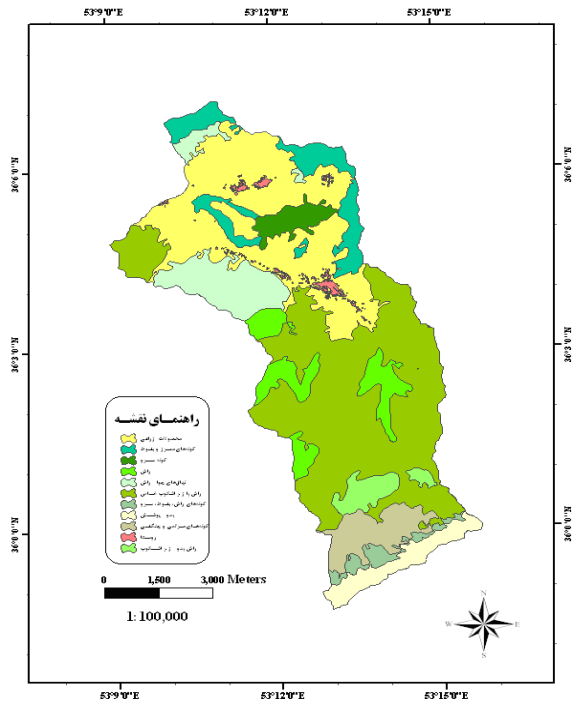


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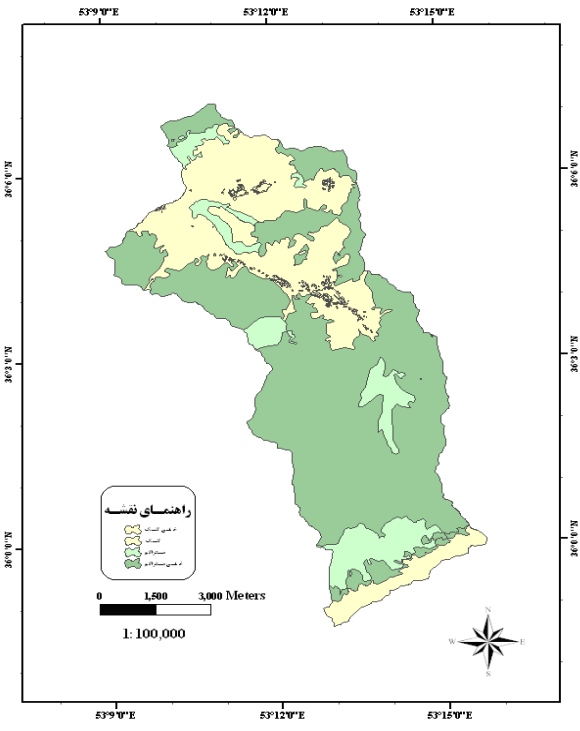
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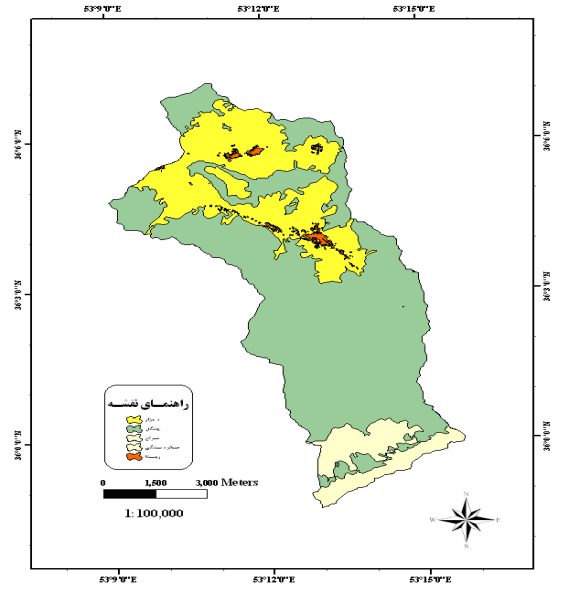


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 NDVI  
 RGB  
 RVI

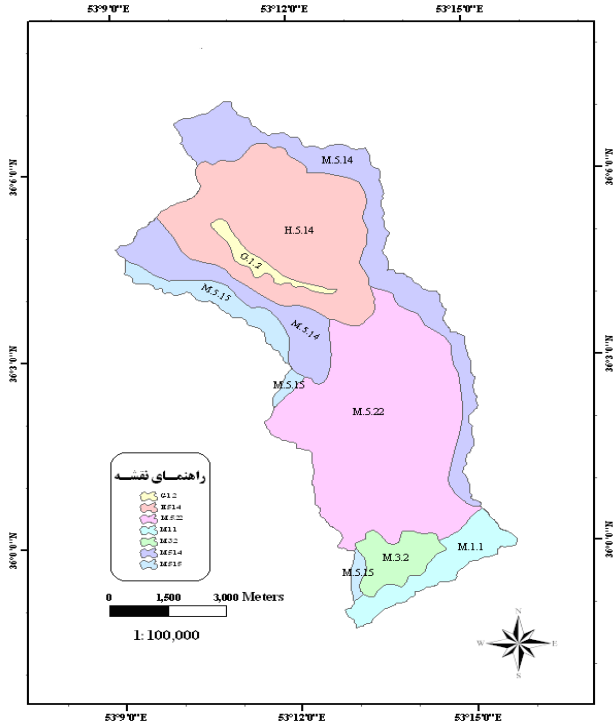
(DRM)<sup>10</sup> (DTM)<sup>9</sup>  
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همچنین

P. C. ArcInfo

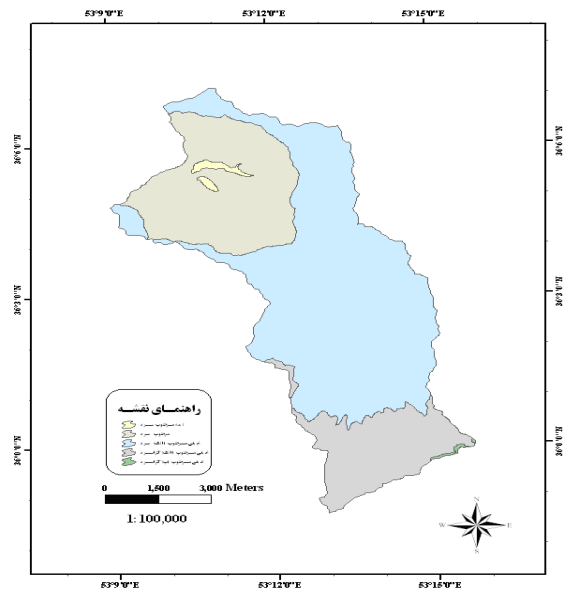
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P. C.

Visual FoxPro

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ArcInfo

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Ch(1,2,3,4)+Cp(3,4,5,6,7)+dsm(1,2,3)+Es(1,2,3)+ps1(1,  
2,3)+pH(1,2,3)+Pg(3,4)+Pd(3,4)+Ps2(1,2,3)+Pdr(3,4)+P  
hg(1,2,3)+Pte(1,2,3,4,5,6,7,8,9,10,12)+Cvt(3)+ Si(5,8)

:  
:AR1  
:AR2 ( )  
:AR3  
:AR4  
:AR5  
:I (Cl)  
:DF  
:H (Clt)  
:CH (Clm)  
:P **AR1[I-CH-AI-P-B-CA-H]=** Clt(3,4)+ Clm(4,5,6,7,8)+  
:B Wc(1,2)+ So(1,2)+ Ct(2,3,4)+ Ch(2,3,4)+ dsm(1,2)+  
:CA Es(1,2)+ ps1(1)+ pH(2)+ Pg(1,2)+ Pd(1)+ Ps2(1)+  
:AI Pdr(1)+ Phg(1,2)+ Pte(7,8,10,12)+ Cvt(3)+ Si(5,8)  
( ) :Cl **AR2[I-CH-AI-P-B-CA-H]=** Clt(2,3,4)+  
( ) :Wc Clm(3,4,5,6,7,8)+ Wc(1,2,3)+ So(1,2,3)+ Ct(1,2,3,4)+  
( ) :So Ch(2,3,4)+ dsm(1,2)+ Es(1,2)+ ps1(1)+ pH(2,3)+  
( ) :Ct Pg(1,2,3)+ Pd(1,2,3)+ Ps2(1)+ Pdr(1,2)+ Phg(1,2)+  
( ) :Ch Pte(4,7,8,10,12)+ Cvt(3)+ Si(5,8)  
( ) :Cp **AR3[I-CH-AI-P-B-CA-H]=** Clt(1,2,3,4)+  
( ) :dsm Clm(2,3,5,6,7,8)+ Wc(1,2,3)+ So(1,2,3)+ Ct(1,2,3,4,5)+  
:Es Ch(1,2,3,4)+ dsm(1,2,3)+ Es(1,2)+ ps1(1,2)+  
:Ps1 pH(1,2,3)+ Pg(3,4)+ Pd(2,3,4)+ Ps2(1,2,3)+  
:pH Pdr(1,2,3,4)+ Phg(1,2,3)+ Pte(1,2,3,4,5,6,7,8,9,10,12)+  
:Pg Cvt(3)+ Si(5,8)  
( ) :Pd **AR4[DF-H-CH-AI-P-B-CA]=** Clt(2,3,4)+  
:Ps2 Clm(3,4,5,6,7,8)+ Wc(4)+ So(1,2,3,4)+ Ct(2,3,4)+  
:Pdr Ch(2,3,4)+ Cp(4,5,6,7)+ dsm(1,2)+ Es(1,2)+ ps1(1,2)+  
:Phg pH(1,2)+ Pg(1,2,3)+ Pd(1,2,3)+ Ps2(1,2)+ Pdr(1,2)+  
:Pte Phg(1,2)+ Pte(4,7,8,10,12)+ Cvt(3)+ Si(5,8)  
:Cvt **AR5[DF-CH-P-CA-B-H]=** Clt(1,2,3,4)+  
:Si Clm(2,3,4,5,6,7,8)+ Wc(4)+ So(1,2,3,4)+ Ct(1,2,3,4,5)+

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|     | ( )    |  |
| 26  | 1785/6 |  |
| 64  | 4418/1 |  |
| 5   | 329/6  |  |
| 4   | 257/2  |  |
| 1   | 59/4   |  |
| 100 | 6850   |  |

Λ/Δ V/1 F/2

6. 5.

C B A

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|       |       | 1.    | 9 | Λ    | V    | 6     | Δ     | F     | 3     | 2     | 1     |     |
|-------|-------|-------|---|------|------|-------|-------|-------|-------|-------|-------|-----|
| .     | .     | .     | . | .    | .    | .     | F/F   | 3493  | 3353  | .     | .     | CP  |
| .     | .     | .     | . | .    | .    | .     | .     | .     | .     | 6818  | 33/4  | Clt |
| .     | .     | .     | . | 33/F | 4936 | 1758  | 123/3 | .     | .     | .     | .     | Clm |
| .     | .     | .     | . | .    | .    | .     | .     | .     | .     | 6851  | .     | Wc  |
| .     | .     | 439/V | . | 3396 | 2288 | F10/V | 199/8 | .     | 22/5  | 73/8  | 20/1  | So  |
| .     | .     | .     | . | .    | 1/9  | .     | .     | .     | .     | .     | 6849  | Ct  |
| .     | .     | .     | . | .    | .    | .     | .     | .     | 6851  | .     | .     | Ch  |
| 3126  | .     | .     | . | .    | .    | .     | .     | .     | .     | .     | 3725  | dsm |
| .     | 36V/9 | .     | . | .    | .    | .     | .     | .     | .     | 2138  | 4345  | Es  |
| .     | 36V/9 | .     | . | .    | .    | .     | .     | .     | 1918  | 20V8  | 2488  | Ps1 |
| 270/F | 36V/9 | .     | . | .    | .    | .     | .     | .     | 3725  | .     | 2488  | pH  |
| 2758  | 36V/9 | .     | . | .    | .    | .     | .     | 1857  | 110/6 | 1757  | .     | Pg  |
| .     | 36V/9 | .     | . | .    | .    | .     | .     | 270/F | 4456  | 1757  | .     | Pd  |
| .     | 36V/9 | .     | . | .    | .    | .     | .     | .     | .     | 270/F | 6213  | Ps2 |
| .     | 36V/9 | .     | . | .    | .    | .     | .     | .     | .     | 4355  | 2128  | Pdr |
| .     | .     | .     | . | .    | .    | .     | .     | .     | 36V/9 | 6626  | 1857  | Phg |
| .     | 36V/9 | .     | . | 4245 | .    | .     | 2128  | 110/6 | .     | .     | .     | Pte |
| .     | .     | .     | . | .    | .    | .     | .     | .     | 1786  | 4906  | 159/1 | Cvt |
| .     | .     | .     | . | 2432 | 4419 | .     | .     | .     | .     | .     | .     | Si  |



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| Wc   | CP    | Clt  | CIm | Ct   | Ch | dSm | Es | PsI  | pH   | Pg   | Pd   | Ps2 | Pdr  | Phg | Pte | So   |
|------|-------|------|-----|------|----|-----|----|------|------|------|------|-----|------|-----|-----|------|
| .    |       | ۱۷۸۶ |     | ۱۷۸۶ | .  | .   | .  | ۱۶۴۴ | ۱۷۸۶ | ۳۷۶  | ۱۷۸۶ |     | ۱۴۹۱ | .   | ۳۷۶ | ۱۷۵۰ |
| .    |       | .    |     | .    | .  | .   | .  | ۱۶۴۴ | ۱۴۲  | ۲۹۵  | .    |     | .    | .   | ۲۹۵ | ۱۷۴۸ |
| .    |       | .    |     | .    | .  | .   | .  | ۳۷۳  | .    | ۱۲۶۷ | .    |     | .    | .   | .   | ۱۷۴۸ |
| ۱۷۸۶ | ۲۹۷/۹ | .    |     | ۱۷۸۶ | .  | .   | .  | ۳۷۳  | ۱۶۴۴ | ۲۹۵  | .    |     | .    | .   | ۲۹۵ | ۱۷۴۸ |
| ۱۷۸۶ |       | .    |     | .    | .  | .   | .  | .    | .    | ۱۲۶۷ | ۱۲۶۷ |     | ۱۷۸۶ | .   | .   | ۱۷۴۸ |

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(Kravchenko and Bullock, 2000)

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(Rezaei et al., 2005)

(Kravchenko and Bullock, 2000)

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(Chen, et al., 2003)

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- 1-Geographic Information System
  - 2-Central Macedonia  
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  - 4-Land Sat.4 TM
  - 5- Global Positioning System
  - 6- Geographic Control Point
  - 7-Universal Transfer Mercator
  - 8-Digital Elevation Model
  - 9-Digital Temperatura Modela
  - 10-Digital Rainfall Model
  - 11-Fields
  - 12-milimho/cm

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Caldiz, D. O., et al. 2001. Agro-ecological zoning and potential yield of single or double cropping of potato in Argentina. *Agricultural and Forest Meteorology*. 109: 311-320. Available online: [www.elsevier.com](http://www.elsevier.com).

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